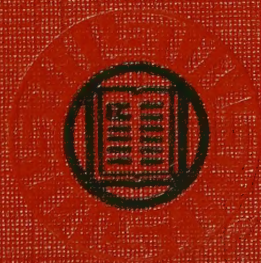


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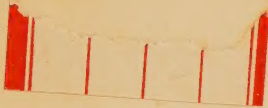
HOWARD



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THE ROAD AHEAD

An Orientation and Guidance Book

By
LOWRY S. HOWARD

President of Menlo School
and Junior College

EDITED AND
WITH INTRODUCTION BY
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Head of Psychology Department
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The Purpose of This Book

THE author has sought to give guidance and information to the student in a way that will serve him not only during his academic years but also in the years to follow. The material in the book has been thoroughly tested as to its practical usefulness to students. For fourteen years classes of college freshmen have worked with and reacted to its chapters in mimeographed form. Each year the subject matter and the order of its presentation have been revised in the light of suggestions made by teachers and students.

This book does not attempt to give answers to all the questions that arise about student life and the wider experiences which follow. However, if the principles gathered together here are learned and put into practice, there is more than a fair chance that the student may reach that goal of everyone — happiness. Happiness is by no means the same thing for each of us, but it is nevertheless attainable by all of us.

It is one thing to know that one's difficulties grow out of an inability to learn, or to study, or to manage time, but it is quite another thing to know what to do about it. After one has decided what to do, the next step is to carry out the decision, and this requires self-discipline. Then it is found that a self-motivated, disciplined life is a happy one.

Acknowledgments

In preparing these chapters much helpful information has come from students and faculty at Christian College, Colorado State College of Education, the College Division

[iii]

The Purpose of This Book

at Menlo, Stanford University, and Stephens College, through their study of the subject matter of the book. The many students and teachers who have written their reactions and contributed their valuable suggestions deserve more than this brief recognition.

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In the light of the war emergency a War Supplement has been prepared and is available to students using *The Road Ahead* as a textbook in classes.

LOWRY S. HOWARD

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Editor's Introduction

IT HAS been my privilege to watch this book take form and grow from the time when it was first planned. The author, who as one of my former students was acquainted with my interest in orientational instruction, consulted with me frequently throughout the progress of his work. I have been deeply impressed by the thoroughness with which the undertaking was carried out; surely few books are ever written with more thoughtful attention to details of organization, content, and form. The author has brought to bear upon his problem the results of wide reading not only in the immediately related fields of education, psychology, and mental hygiene, but also in biology, philosophy, and the social sciences.

But *The Road Ahead* is not chiefly a product of library industry. It was patiently hammered into shape as a result of experience gained in the laboratory of the classroom. The content of every chapter has undergone successive revisions based largely upon student reaction. The book as it stands has demonstrated its appeal to students and its effectiveness as a guide to their better orientation.

A central purpose of the book is to cultivate in the student the will to self-analysis, a readiness to assess objectively and unemotionally his abilities, his disabilities, his motivations, and his customary patterns of adjustment. That the author's approach is successful is indicated by the hundreds of letters he has received from his students in spontaneous expression of appreciation for what the course had meant to them. The tone of the book is such

that the student who is led to see many weaknesses in his abilities or personality is not left discouraged and hopeless, but instead with the feeling that knowledge of both his assets and his liabilities has made him stronger than before. There is a steady build-up of this attitude to its culmination in the discussion of a philosophy of life (Chapter 14).

The Road Ahead is scientifically sound, but it is not so coldly scientific as to be impersonal. The spirit of the author can always be sensed — his deep interest in the problems of youth, his sincerity and enthusiasm. This quality enables him to get and to keep in rapport with the reader. He does not preach and he does not talk down to his audience.

One of the worst faults of certain books in this field is that they treat too many problems and ramble from topic to topic with so little plan that the information on a given subject is scattered through many chapters. The result is that nothing is driven home and the student is left with a jumble of vague impressions. In *The Road Ahead* much attention has been given to organization. Each chapter is a definite unit and the material that belongs together will nearly always be found together.

Anyone who undertakes to prepare a textbook suitable for a required course for college freshmen faces a difficult task. As the investigations of Learned and Wood have so well shown, the young people who flock to our colleges represent an enormous range of ability and cultural background. Although no text could be written that would be equally well adapted to students of all levels, I think that *The Road Ahead* has come as close to this goal as any book I have seen. The material is so clearly and interestingly written as to be within the comprehension of the great majority of students, yet is so rich in suggestions

for further reading and study that it will stimulate the more gifted to superior achievement.

A course in orientation along the lines represented by this book ought to be required of all first-year college students. One of its many advantages is that it provides an ideal background for the counseling and guidance service. More effectively than anything else it puts the student in proper mood to profit from personal consultation and advice. The latter, in turn, should augment the student's interest in the course. Perhaps the best method of bringing about this desirable interaction is to reserve one weekly class period in the orientation course exclusively for individual and group counseling.

I think the best results with this book will be secured by a year's course with two class periods and the additional counseling period each week. If the purpose of the course were merely to impart factual information which could be learned out of a book, one semester would probably be ample. It should be obvious, however, that the chief value of such courses does not rest on the information the student accumulates. The self-analysis, personal adjustment, and reshaping of goals which *The Road Ahead* is designed to foster are growth processes that in their very nature cannot be hurried.

LEWIS M. TERMAN

NOTE. War adjustments in high school and college curricula, and the drafting of teen-age boys, are emphasizing the necessity for high school orientation and guidance courses. To students who will interrupt their formal high school education for the duration, the method of *The Road Ahead* is as applicable as it is to beginning college students.

L. M. T.

December, 1942

Chapter

I

SETTING THE COURSE

"You can never have a greater or less dominion than that over yourself." LEONARDO DA VINCI

RELATIVELY few persons really attain full-capacity achievement. Not many know the extent of their own capabilities under strongly motivated conditions. Is there anything more important to one's personal satisfaction than the ability to get the most out of life? How to do this effectively is the question this book poses, and also attempts to answer, for college students.

Going to college is a great deal like a journey into new country. For such a journey one would seek to find road maps and would welcome the advice of those who had explored the country in question. Just so, orientation, or direction-finding, is needed for the college experience, involving as it does new subjects, new associates, and changed conditions of living and of work.

Fortunately, those who have gone before have charted many of the landmarks and milestones that give direction and breadth to a college career. With these landmarks clearly in view, the student can avoid the meaningless wanderings which so often characterize the course of those who lose their way.

The college student can escape bitter experiences by learning the processes of orientation which will provide direction to his life. Thoughtful reading and study of this book will give him a picture of the forces and energies which he possesses and over which he alone can gain domain. This chapter is a preview to those following. Its aim is to indicate what is ahead for the student in his hours of reading, study, and class discussion. Each of the succeeding chapters deals with a whole area of college living.

Certain items may seem familiar and commonplace; other thoughts may be new to the reader. The discerning student will get his cues in advance as to where stress should be placed, what he should read with care and what he may read more rapidly. His objective will be to integrate the old with the new in a total working concept.

Happier and more efficient years ahead result from a good start. The important principle for any student is to know his destination and then set his course in that direction. The following paragraphs suggest some guideposts. They are offered in the belief that they will be helpful to the student in finding and maintaining his direction both in college and in later life.

Our needs are significant guideposts

All of living is dedicated to satisfying needs. Our understanding of our needs and the way we act when needs conflict with one another determine the course we follow toward adulthood and responsibility.

Needs vary with the individual. Although we all have certain biological needs for sleep, food, water, and so on, our individual demands differ even for these. Some people need more sleep than others; some seem to need more or different food than others. Individual variations

are even greater when we consider less definite needs — needs, for example, that evolve from social situations or personal desires, or the complex types of needs that arise from the interrelation of all the personality factors.

Differences in needs are caused by both inherited and environmental factors. For example, the need of a college freshman for a feeling of security in his new environment may involve several elements. How readily does he form new friendships? Can he adapt himself easily to new living conditions? Is he capable of mastering college work? Does he know how to coöperate in college activities? His ability to do these and other things depends upon a combination of his inherited traits and his former and present environmental influences.

Everyone reacts differently to different situations. That needs depend upon circumstances may be illustrated by the conduct of a boy fighting, who in the midst of his battle spied a red apple. The expected reaction of a boy to an apple is to eat it, but in this case he threw it at his opponent. The situation under which he was operating at the time governed his use of the apple. Just so, the way in which a student will conduct himself in the college situation depends upon his needs or desires at the time.

It is important that the student know and recognize his needs: first, to develop his personality in the way he most desires; second, to resolve the many conflicts that arise in everyday living. If we do not want to be sidetracked in our life aims, we must be able to evaluate both long-range and short-range needs and to place them in proper relationship to each other. For example, a student who feels an immediate need for superiority may seek to impress his associates by lavish spending, thereby depriving himself of funds needed for college requirements. Thus he may fail to attain his long-range need, his vocational goal. If

he sees his various needs for what they actually are, he may quickly gain direction. (More on the subject of needs will be found in Chapter 2.)

Learning is the roadbed

School, college, and all of life is a continuous learning experience. In any field of learning efficient methods bring advantages far beyond the actual accomplishment. For example, take the golfer who has learned the game without formal instruction and has acquired some bad golfing habits. Probably he has developed a defensive attitude of resentment toward players who execute with ease shots which he misses. If his interest in his ability or his persistence is sufficiently great, he decides to take lessons. With added skill and the substitution of good strokes for poor ones, he really begins to enjoy the game and it becomes a recreational pleasure rather than a mental hazard.

The same principle applies to any sport and in equal measure to learning from books, lectures, and laboratory experiments. As we learn we change. Whenever an individual gains the ability to perform a task with greater facility, his whole being is to some extent changed and he becomes more receptive to further learning.

To learn efficiently — to reduce the trial-and-error procedure to a minimum — one must have understanding based on related earlier experiences. It is easier to memorize a series of meaningful words such as *red, mob, sin, top*, than it is to learn a series of nonsense syllables such as *tuv, meb, ler, pom*. Similarly, it is easier to grasp the meaning of a series of words and sentences which have acquired meaning because of previous learning experiences than it is to understand material for which one has no background of knowledge. Errors can be avoided by

learning subject matter in meaningful sequence, and the more meaningful the better.

There is a thrill in learning when it is carried on efficiently. The more facility one attains through training, guidance, and experience, the greater is his satisfaction in learning and the more notable his success. (In Chapter 3 the student will find a discussion of the psychological laws of learning, of which the principal one is motivation. We learn best when we are highly motivated.)

Study is the road

Teachers bemoan the fact that so many students enter college without knowing how to study effectively. Habits of reading for study purposes and the ability to take notes, to write term papers, and to prepare for examinations, are all subject to improvement. Efficient study habits can be developed provided the student really wishes to learn and will make an effort to do so. Once established as habit, efficient study produces better results with less effort than do haphazard periods of slack and cramming, or even persistent effort without organization.

Study is a discipline, but to be effective it must be self-imposed. For example, picture a lecture room filled with students. The lecturer is saying, "It is well to *bridge* this gap in your knowledge. . . ." The word "bridge" starts some of the students off on mental wanderings. John thinks about the beautiful bridges he is going to design some day; Betty starts to worry about the condition of her teeth and decides to make an appointment with her dentist; Bill sees in his mind's eye the wobbly wooden bridge near an old swimming hole; and Joan thinks about the wild bidding in last evening's bridge game. Many students physically present at classes are mentally absent from the subject at hand.

To study successfully one must really desire the knowledge. The college student who is ambitious to enter a selected vocation is to that degree motivated to learn, and therefore has less difficulty in disciplining himself to study than has the student who attends college because his parents desire him to do so or because his friends are attending. The strongly motivated student will learn how to study effectively and will apply the knowledge so gained.

All of us do best those things which we like to do and in which we are keenly interested. In study, as in other activities, we tend to postpone that which we do not enjoy. If motivation and interest are lacking they can be acquired, even by the student who can see no direct need for the specific subject. Motivation is provided by long-range ambition, by short-range aim for good grades, by determination to succeed in a subject for self-satisfaction, by intellectual curiosity, by realization that subjects required for one's course have some value or they would not be included in the curriculum, and by other drives. The big job for the student, then, is to motivate himself.

Study is the student's business. Efficient study pays dividends after college just as it does in college. A record of good scholarship is helpful when one enters the business world, both as a reference and as a direct aid to advancement through the acquired habits of self-discipline, concentration, and efficiency which build that record in school. (Chapter 4 is devoted to an analysis of study and study habits.)

Efficient reading smooths the way

An indispensable tool for successful college work is the ability to read rapidly and with comprehension. Most of the college student's work involves reading. One would

not expect even an expert woodsman to accomplish much with a dull ax; likewise the college student cannot expect to be successful in his work if his reading — his principal tool — is not equal to the task. Time spent in improving his reading ability will prove well worth while.

Evidence from actual reading measurements indicates that the reading rates of entering college freshmen range widely — from fifty words to nine hundred words a minute. Yet when students are asked if they read sufficiently well for college work, they all reply indignantly: "Of course. If we didn't, how would we be able to get here?"

In reading ordinary assignments with full comprehension, a college freshman should average approximately 325 words a minute. Students who do not meet minimal standards should undertake correctional work. One's reading rate can be checked and tested. It can be increased. Programs for improving students' ability to read are now being organized in most colleges.

There is no more important need for success in college than to be able to read with facility. One can *read to learn* only after one has *learned to read*. (Recent discoveries in the techniques of reading are explained in Chapter 5.)

Time wisely spent speeds the course

Most college students have more time than money. If everyone spent his money as many students spend their time, everyone soon would be bankrupt.

Money is tangible, whereas time, our most valuable resource, is intangible; but in many respects the two are similar. Either, profitably used, works to one's advantage. If a person is to be free from debt at the end of each month, he must budget his expenditures in a definite way. Although less obvious, this is equally true in the case of

time. Worries decrease and life's enjoyments increase when money is spent wisely; the spending of time follows the same pattern.

Students argue against the time budget — the study schedule — saying that they do not want to regiment themselves. Observation indicates conclusively that instead of becoming regimented by the use of a schedule, the student actually attains greater freedom and has more time to spend in activities of his own choosing. This usually helps to solve one of the greatest problems of the college student — that is, how to find time for relaxation and pleasure as well as for adequate study.

Time, mental and physical health, energy, and money are the student's most valuable assets. With proper use of the first of these, the others can more readily be put to effective use. (Chapter 6 gives specific and workable suggestions for more effective use of, and more enjoyment from, the twenty-four hours of the day.)

Background influences the direction

Each individual goes through various stages of development in the course of his life. During the nine months before birth the embryo is said approximately to retrace the life history of the race from the lowest organism up to man. The way an individual acts today depends upon all the many influences that have touched his growth. The interaction of his inherited traits with environmental influences constitutes the background that has made his personality what it is at the present time.

Does the student go to college because he has the background for college training, or does he go to college to build background? The answer is, for both reasons. Many heartaches and disappointments come to students who lack adequate preparation for their purposes, their aims.

Success in freshman courses often depends upon abilities which the student should have acquired or developed in high school. For example, the reading of many novels is required in English literature, and for this the ability to read rapidly is needed. Other subjects may require a good background in mathematics, sciences, or foreign languages. If the student lacks the required foundation, a serious problem results.

Freshmen may very easily "get off on the wrong foot" because their backgrounds have not prepared them for college living. A person who has been sheltered in the snug harbor of an overprotected home may find himself incapable of adjustment to the rougher waters of college life. Life in a small town is in many cases not adequate preparation for a career in the larger and more complicated college community. Some students are quite gullible when they enter college; others are too sophisticated to fit easily into the simpler life of the college community.

With a strong will to achieve and sufficient drive or purpose, many — or all — of these handicaps can be overcome. When the student's lack is social and cultural, he needs more than ever to study the factors of his early development and work toward a better background for the coming years. As Bond says, in *Give Yourself Background*:

"We can define background as a personal cultivation. We can cultivate background as we can cultivate a flower in a garden, with much the same care and much the same success."

College years present an opportunity for this improvement. Indeed, to lay plans early in the freshman year for the development of cultural background is as desirable as it is helpful. (Note Chapter 7 for more on this topic.)

The total personality is the vehicle

The most interesting thing in the world to each of us is our own self. Personality is the way a person talks, walks, thinks, acts, and looks; it is the sum total of his behavior and attitudes. Every human being is a personality — even the most defective individual.

Without knowledge of the significance of personality, an individual may well become his own worst enemy; with such awareness he learns to understand both himself and others. The study of human personality is basic to a comprehension of human life. The wise have always studied it. Present-day scholars are devoting more and more time to research in the subject.

Errors in judgment regarding personality come from evaluating individuals on the basis of one or two traits or characteristics. For example, one may say, "He has a fine personality," thinking merely about appearance. A college student should find greater enjoyment in social life as he develops the ability to judge each individual he meets as a whole person, taking into account the various factors that constitute a balanced personality. He should first study his own personality and then he probably will be able to evaluate more fairly and more charitably the characters of others.

If one's personality traits are integrated — that is, if they work together in relative harmony — they present the picture of a well-balanced person. If one really wants to understand people and to enjoy associations with them, he must understand the working principles of a balanced personality. Balance is a matter of degree; it ranges all the way from the complete poise of the perfectly integrated person to the complete unbalance of one who is mentally ill. Distortions of personality which cause all persons at

times to do and to say peculiar things are universal. Students today are interested in scientific attempts to understand man's behavior. (Chapter 8 explains how various traits work together to form a balanced personality.)

The body is the engine

Popular advertising of drugs and vitamins and whatnot to take to get well and to keep well has made many people health-conscious. If we were to comply with all the advertised advice, we probably should be health-delirious. Nevertheless, to a large extent advertising capitalizes on the desires and fears of the public. Large sales of nostrums are factual evidence that people in this modern day of tension and strain fear that their bodies will be unable to keep the pace. It is essential, then, that we know the facts concerning our own health as scientifically as possible, in order that we may counteract ignorance and much prevailing mystery regarding health.

There is nothing about which we understand less and expect more than our own bodies. We expect miracles from them daily, and strangely enough they constantly perform miracles for us.

It is now common knowledge that mental processes affect physiological reactions, and vice versa. The Pavlov experiments showed that if meat is fed to a dog when he is calm and happy, the salivary glands function perfectly and the gastric juices of the stomach flow freely. But if a cat is placed in front of him at the same time as the meat is offered him, the digestive juices do not flow. In our own bodies the emotions of fear and anger definitely affect our health by disturbing digestion.

No person should be satisfied just not to be ill; to be vibrantly healthy is the goal toward which he should strive.

When a person is unhealthy because of heredity, accident, or pure disobedience of the laws of health, he needs to know how to correct the condition. If one is well, he must keep well; if not well, he must get well. In either case it is important for him to know the laws of health, in which proper food, rest, and relaxation are of prime importance. (These factors are discussed in Chapter 9.)

A healthy mind gives momentum

Suppose a student feels blue and depressed, or suppose he feels antagonistic and hateful toward himself and everyone else. He may withdraw within himself and suffer in silence, or he may become vociferous in his denunciation of other people and situations. In any event, his behavior is unreasonable and, if persisted in, may be harmful to himself. If he were physically ill, he would treat himself or see a doctor. Why does he not use the same level of understanding in the case of a mental tailspin? The answer is, because he lacks understanding in the field of mental hygiene. Time being a great healer, he will recover from his mental ills if the malady is not too severe. In case of a major mental disturbance, however, it is just as sensible to consult a psychiatrist (physician for mental illness) as it is to call a doctor when the symptoms of physical illness appear.

There are times in the life of each of us when fears and frustrations bring about attempts, either conscious or unconscious, to dodge unpleasant facts. Mental-health procedure is to face and analyze such situations and to adjust oneself to the reality that exists. Students, like other human beings, on occasion seek to excuse themselves for their behavior, and this is a tendency to avoid reality. One type of student, for example, is likely to present an alibi to explain why he has not completed an assignment.

His defenses are not necessarily founded on fact; more than likely the facts are circumvented and a plausible story is substituted. In his own eyes the student has justified his failure. If the truth of the case is that he lacks interest in the subject yet must pursue it as background knowledge in order to attain his vocational goal, he should recognize this fact. Such recognition will lead to motivation to do the work. Even if he lacks native ability in this particular field of learning, he will come out ahead if he faces this fact and searches for a solution of the problem involved.

As long as our mental quirks do not result in overt unreasonable reactions we can maintain a certain stability, but not so adequately as if we followed the principles of mental hygiene. These everyday mental problems most of the time are so close to us that we fail to recognize them. Usually they are no more serious in effect than, say, a headache or a common cold, but if not intelligently treated they may become serious. (In Chapter 10 we direct our attention toward showing that good mental hygiene is just as important for effective living as good physical hygiene, and that a fund of knowledge is now available to help us attain and maintain good mental adjustment.)

Emotional adjustment affords efficiency

There comes a time in the life of any young person when interest in the other sex becomes paramount. This interest, particularly when it singles out one person, often becomes so intense that thoughts and imaginings in regard to the other person are not rational. What is this symphony of feeling that sweeps individuals off their feet, so to speak? What is this affinity, this attraction that causes young men to lose interest for the time being in

their school or college work so that nothing matters except "just to be with her," and that causes girls, too, to behave irrationally?

Every younger generation has questioned its elders in regard to the *mores*, or conduct patterns, that are handed down. The child rebels when he must learn to eat with a fork rather than use his fingers. Fingers were made before forks; nevertheless, society demands that he use a fork. Similarly, certain customs and manners are demanded by society in girl and boy companionship. Unless one accepts these rules as he has accepted the custom of using a fork, he will suffer social difficulties.

To label parents as "old-fashioned" is begging the question. The older generation, represented by parents and other adult members of society, is only passing on, in modernized and liberalized form, what has been handed down to it. It is difficult for young people to realize that their children, the next generation, will call them "old fogies," or some as yet unthought-of counterpart for that term. What a jolt for the present younger generation even to try to think about this!

College men and women of each generation behave toward each other in a manner different from that of the preceding generation. Such changes are the way of the world, and change in the field of sex relations is not new. The balanced personality of each generation demands only such change as society can assimilate.

There are individual differences among college students in their behavior toward the other sex, caused by both hereditary and environmental factors in their lives. (In Chapter II the importance of wholesome companionship between men and women is discussed in relation to personality adjustment.)

Adequate vocational choice is the desired goal

Young men and women of college age are as a rule eager to be settled in their life occupations. Some of the more restless among them feel that years spent in college are wasted years; consequently, these students leave school at the earliest opportunity. If these young people are ambitious, they are likely to regret such action. They will discover that they could have secured the technical information required for most desirable positions more easily and effectively in college than out of college. If one of these students does get a start upwards, he will discover that he lacks desirable background knowledge of literature, art, and the social sciences. He will wish that he had secured this during his possible school years, the more so because industrial communities seldom offer cultural advantages.

Individuals should go directly from high school into a vocation only when lack of funds or lack of ability permits no alternative. The point to recognize is the value of college years for the study of one's own personality in relation to various possible occupations, or as direct preparation for a chosen vocation.

The field of vocational opportunities for trained men and women is broader at the present time than ever before. This makes the selection of a suitable occupation more difficult. But the college student today has the advantage of opportunities for constructive vocational guidance based upon scientific psychological principles. (Chapter 12 shows that intelligent vocational choice is a matter of exploration of one's interests and abilities.)

Thinking helps to select the straightest route

Words, words, words! Little does the student realize how often his choice of words makes or breaks him.

Words are the means of expression and also symbols for thinking, which proceeds only through their use, as may be readily demonstrated by trying to think without using words. Students of a foreign language always think at first in words of their native tongue and then translate these words into the new language.

Probably in no area does the mind play more tricks on students — and on others — than in the field of thinking. Objective thinking deals with facts and uses words that describe those facts. Emotional thinking, on the other hand, uses words that are based on feeling-tone. For example, the word “liar” has a different connotation in thinking or in expressing thoughts from the phrase, “one whose interpretation or understanding is erroneous.” In his book, *How to Think Straight*, Thouless says:

“Once we are on the outlook for this difference between ‘objective’ and ‘emotional’ meanings, we shall note that words which carry more or less strong suggestions of emotional attitudes are very common and are ordinarily used in the discussion of such controversial questions as those of politics, morals, and religion. This is one reason why such controversies cannot yet be settled.”

To know words and how to use them is essential to reasoning and to the formulation of reliable judgments, for judgments depend upon the clarity of one’s thoughts and upon the degree to which emotional thinking is controlled. In life we are continually making judgments, in small matters and in large, and on each conclusion we base our thinking for the next judgment. It is important, therefore, that we avoid prejudice, bias, rationalization, and “tabloid,” or formula, thinking.

David Starr Jordan, first president of Stanford University, once said, “An educated man is good company for

[16]

himself." The term "educated man" in this sense does not mean necessarily a man with a college degree. It implies a person who has a background of knowledge for sound reasoning. (In Chapter 13 the road to straight thinking and to reliable judgments is pointed out.)

The philosophy of life sets the course

Everyone wants happiness, which is the by-product of a sense of gratification and well-being. The possession of happiness is dependent upon one's ability to evaluate needs. For this, perspective is necessary so that one may be able to determine the value of immediate needs or desires as compared with long-range needs. Life calls for continual selection and rejection.

Most men and women who have achieved distinction had a purpose or a goal toward which they worked. One cannot fail to be impressed by the life story of Madame Curie, discoverer of radium, who devoted her life to science and to mankind without thought of fame or of money, except to advance her study. The greatness of Lincoln, too, sprang from his love of mankind and his desire to help mankind. If we study the lives of people who have achieved success, it becomes clear that these men and women were able to see their daily activities in relation to their whole lives. They had purpose; they also had perspective.

Life itself is simple; it is man that makes it complicated. Man's intellect gives him many advantages over other animals, yet he lives a life of much greater confusion, enmeshed as he is in a multitudinous array of material things and in a constant struggle with conflicting desires, with prejudices, and with greed and avarice and ambition. To unravel the tangle he needs a definite goal, promoted by enlightened self-interest and seasoned by a sense of

humor and of proportion. This provides a way of life which is a good philosophy of life, and leads to happiness. We must learn what needs are important to us and strive toward their gratification, retaining always a sense of perspective. (In Chapter 14 we shall discuss these and other factors essential to a true philosophy of life.)

The trends of today may forecast tomorrow's course

The universe has changed little since man evolved. The sun, stars, and moon still travel in much the same orbits. Seasons come and go, rivers flow, and trees grow. The laws of self-preservation operate just as strongly in the present world as they did in that of primitive man. Human living — social, economic, physical, and mental — is the one thing that changes constantly, and these changes create needs for continuous adjustment.

Science has advanced so rapidly that man has been biologically unable to keep pace. For example, automobiles guided by man travel sixty or more miles an hour, but the human eye cannot see objects or transmit messages to the brain at anywhere near that rate. On modern highways, built for speed, the eye ordinarily does not need to see so fast, because it is aided by safety devices and the accepted rules for driving. As proof of this, take an automobile off the highways into open woods where every few feet there is a stump, a rock, a rut, or a tree. Under such conditions man's limited biological equipment forces him to go slowly if he is to avoid wrecking the car and injuring himself.

Patrick Henry, in a speech to the Virginia Convention, said:

“I have but one lamp by which my feet are guided, and that is the lamp of experience. I know of no way of judging the future but by the past.”

His statement is as true today as when he uttered it on that March day in 1775. Life insurance companies survive because their statisticians figure accurately the probabilities of life expectation, using figures from the past. Automobile insurance companies likewise base their rates on the numbers and costs of accidents that have occurred during preceding years.

To be able to forecast trends in the mechanical and scientific fields has a certain positive value to man in predicting his future progress. It would be more valuable to the individual, however, if man were able to weigh and assess the trends in his own personality — to evaluate the human qualities which determine the degree of his success and happiness. Apparently the one quality in human nature which can be counted upon to direct man invariably is self-interest. His other motives are subject to economic and social changes, which his inventive genius produces constantly. This fact renders meaningless most predictions as to what man's economic life will be twenty years hence.

The probability of success in college is now considered reasonably determinable. There is a fairly high correlation between scores on aptitude tests and college achievement. Most of the prediction is for groups of students on the basis of averages for the population as a whole, but definite clues are being developed by which individual forecasts may be made. If the student is to be ready for his life ten, twenty, or thirty years from now, he needs to study himself and to be alert to every clue that bears upon the problem. College offers him source material. By developing his abilities and selecting his course in life, the college student will be able to build a personality adequate to meet the changing world. (Chapter 15 discusses source material in this field.)

Chapter

2

STUDENTS HAVE NEEDS

"We have not found that any confusion arises when we use 'need' at one time to refer to a temporary happening and at another to refer to a more or less consistent trait of personality."

HENRY A. MURRAY

NEEDS give us motive power. We spend our lives striving to satisfy our needs. Needs exist wherever there is life. Everyone has them. As individuals and their environments vary, so do their needs. Some persons must have good clothes in order to be content; others want power; others, flattery. Fundamentally, everyone needs security, self-confidence, and a feeling of belonging to the social group. These basic needs are especially evident in young persons. They are still functional in later life but often so disguised that they are not recognized.

Murray, (3) in the quotation above, points out that needs may be only temporary or they may be relatively permanent, furnishing a continuous drive to satisfy the developing personality. For example, the need to solve a specific problem before tomorrow's mathematics class is only temporary; a need to satisfy a life's ambition constitutes a relatively permanent drive. Also, some needs are recurring. The simplest example of this is hunger.

Students Have Needs

A need continues to affect the person as long as it remains fully or partially unsatisfied. Desires and yearnings that cannot be satisfied relatively soon often cause individuals to become unhappy or frustrated. For example, the college student who wants to "belong" may feel a need for an automobile. To possess a car does not give fundamental or biological satisfaction, as does food or clothing or shelter. The need for a car here represents both a social need for "belonging" and a personal need for prestige. The desire for a car is an acute need when it is measured in terms of an occasion such as an important "date." Failure to satisfy this need may be the cause of unhappiness.

People may have needs of which they are not aware. For example, if one has dental caries he may suffer no pain and therefore may not be conscious of this health need. Consequently, he has no urge to go to the dentist. Failure to do so may later provoke difficulties.

Needs in conflict disturb personality

To recognize one's desires, wishes, wants, and longings, and particularly to note when they conflict with each other, is the basis of personality development. A value to be gained from study of the concept of needs lies in one's ability to assay conflicting needs. To know one's needs, to evaluate them, and to apply this knowledge will organize a disorganized personality.

Present desires and wants often conflict with needs for the long-term welfare or happiness of the individual. The tendency is to act on the basis of immediate desires, but the leavening force of long-range needs is important to the individual. Take the case of a young man whom we shall call Jim, who wanted to follow in his father's footsteps and become a physician. To accomplish this

end, Jim's outstanding need academically was to master chemistry. His problem was to bring this need into focus so that it would function as a drive. Perhaps he was not earnest enough in his desire to be a physician to put the necessary energy into the study of chemistry. Probably he was more aware of his present need for enjoyment in college than he was of his long-range need for a background in chemistry. In other words, his needs were in conflict. The immediate desire for fun competed with and inhibited his need for study.

The importance and prevalence of such conflicts has long been recognized by psychologists. Murray, as a result of his clinical and experimental study of fifty students at Harvard University, concluded that:

“Among the commonest subjective experiences is that of conflict between desires, and that of having one desire inhibit another.” (3)¹

Undoubtedly the greatest problems of the individual in his adjustment to life center around his ability to resolve these conflicts. Both students and adults frequently need counsel or opportunities to discuss them with others. The response to such conflicts is an excellent measure of maturity.

Needs in relation to environment

One cannot study needs outside their relationship to the social environment. Where we are and what we want most while there determine our needs for happy living in any place. If, for example, we travel, there are

¹Numbers in parentheses following names and quotations refer to correspondingly numbered references in the “Suggested Further Readings” at the end of each chapter.

specific needs for each particular journey. Should we accept employment, there are special needs for success. The student in college has needs that must be satisfied. Some of these are the same as those he had before coming to college, and some have special significance because he is in college.

Specific needs listed by students include many that bear a direct relation to their environments. For example, in a class of eighty freshmen from economically superior homes, forty said they needed money and fifteen were sure they required automobiles, for happiness in college living. Some, less specific in their analysis and more thoughtful, mentioned the need for a greater feeling of security. This lack in their lives was traceable to diverse factors such as uncertainty as to their future, unfortunate family conditions that left them baffled in their emotional life, and academic insecurity arising from incompetence. Several said their greatest need was the knowledge of being wanted or loved, either by their families or by persons of the opposite sex.

Upon cursory analysis, it is evident that the needs expressed by these college freshmen are of different kinds. Although they desired material satisfactions like money and automobiles, they also wanted emotional satisfactions such as affection, security, and satisfying achievement. All these are needs.

Definitions of needs

We introduced this discussion with the assertion that everyone has needs. This statement seems as commonplace as the word "needs" itself. Yet even the word "needs" may suddenly become strange when it is made to express a concept that is new to the reader or listener. When we say we need something to eat, the meaning is

clear. But when we encounter less obvious needs, such as those involved in social service, patriotism, or religion, it is far more difficult to express the meaning of the word "need" with the exactness of a mathematical formula. As we comprehend the importance of the concept of needs in explaining human behavior and in learning how to live, we see that we must have a clear idea of what we mean by "needs." Psychologists are struggling with the concept, and biologists are trying to make progress in exact application of the word to explain the life processes.

In this connection, it is interesting to note that some other terms are used almost interchangeably with the word "needs." Some of them are "wants," "desires," "longings," and "drives." These words express shades of meaning.

Thayer, Zachry, and Kotinsky, in their book, *Reorganizing Secondary Education*, present two concepts of needs. The first involves "the wishes, desires, longings of the individual, as when it is said that 'this person needs love' — meaning that he is hungering and questing for love." In their second interpretation they speak of a need as something "which is lacking to transform a prevailing set of conditions into another and foreseen set, as when it is said that 'this wall needs paper' — meaning that the paper will transform the wall from its present condition to another (and presumably more desirable) condition." The first interpretation specifically describes a need as a desire, the second as a lack of something requisite or useful. If one lacks friends, we naturally suppose he needs friends. If he desires friends, this need would fall in the first classification. However, he may not desire friends and may profess he does not need them, yet others may realize that friends are necessary for the development of his personality. In that event his need

falls into the second category, that of something requisite or useful.

Murray says, in his previously quoted study:

"A need is, by definition, the force within the organism which determines a certain trend or major effect . . . a directional process. . . . A need, as defined, closely resembles in all its relations the inner feeling of tension which seems to impel us to strive for a certain goal." (3)

Referring back to Jim's case, his need to master chemistry was a definite outcome of his desire to become a doctor. If his desire to enter medicine becomes a real drive, he will satisfy that need by "plugging away" at chemistry so as to become a doctor. In that event there would be present an inner feeling of tension which would impel him to strive toward his goal. This is a directional process. Any force that incites action to satisfy a need starts from the feeling or consciousness of lacking something.

It is well to bear in mind that any analysis of needs is merely a human interpretation. We cannot look at a need as we look at a chair or a table. We look at it as behavior which implies a need. For example, we see an emaciated young person whose skin is pale. We interpret such a condition as implying a need for food — we cannot actually see his nutritional need.

Most needs actually are integrated with and overlap each other. For purposes of study, however, it would seem desirable to develop a plan of classification similar to that used by Daniel A. Prescott in his book, *Emotion and the Educative Process*. (4) With this in view, the next two sections of this chapter will be concerned with a description of needs. The material will be presented in accordance with the following outline:

Felt and Unfelt Needs

- (1) Felt needs
- (2) Unfelt needs

Origin of Needs

- (1) Biological demands
- (2) Needs arising from social situations
- (3) Personal desires
- (4) Interrelation of all needs of the personality
 - (a) Facing reality
 - (b) Harmonizing with reality
 - (c) A workable philosophy of life
 - (d) An increase of self-direction
 - (e) A balance between success and failure
 - (f) Attainment of individuality
 - (g) A general feeling of security

The student will find it helpful, first, to get in mind the general organization and, second, to refer back to this plan while reading subsequent sections, in order to see the relationships of the separate parts to the whole.

Felt and unfelt needs

Sometimes we are conscious of our needs, and at other times we are not. It is apparent that our consciousness of needs varies in intensity. The principal factor is how clearly, if at all, needs are felt. If we are temporarily deprived of basic satisfactions — food, clothing, or shelter — we become fully conscious of our need for them and struggle hard to satisfy these needs. However, when all of them are met adequately, the need for each recedes in our consciousness and is replaced by other needs.

It is one thing to know one's needs and another to satisfy them. The conscious or felt needs are simpler to satisfy than those which are unconscious or not felt. If one could know his needs accurately and could possess the ability to satisfy them, he would be an individual without seriously disturbing personal problems.

(1) *Felt needs.* Felt needs are those of which we are *fully conscious*. The desire for a car when we have a "date," for a radio when we are unable to attend a "big game," for a rest and a vacation when we are tired and bored, are good examples of felt needs. They loom up as important and generally lead the student either to some form of action to satisfy his need or to irritation and resentment if it is not met. In other words, such needs have definite meaning to the individual. For the student who works out a plan or schedule for study, the more conscious he is of the need to study, the more meaningful will be his schedule. This need may have been forced into his consciousness by low grades, by the counsel of an interested instructor, or by his own realization of his immediate need to study in order to satisfy a long-range need — his ambition to reach a vocational goal.

The felt need is the one of which we are conscious *here and now*. Consider the student who is more actively conscious of his desire to collect stamps, or to build model airplanes, or to attend social affairs, or to participate in college athletics, than he is of his need for organized study. In such a case the immediate pleasure to be gained from satisfying the acute desire is a conscious need and may overshadow the need for study which may be in the periphery of his mind.

One of the purposes of education is to offer the individual an opportunity to become increasingly aware of his needs and to study and evaluate them. The educated man is one who has understood his needs and has ordered his life in accordance with certain standards of excellence. It would be reasonable to state that all learning is a felt need. The degree of our consciousness of it may vary and on occasions it may be inhibited by needs of greater momentary intensity. In an address to teachers reported

in the *Teachers College Record* for March, 1937, William Kilpatrick stated:

“Learning is lasting in the degree that the need for the element learned has been felt and in the degree that the element seems to answer the felt need. . . . We cannot force any specific learning upon them [students] and it is dangerous to try. This is of course a hard saying to many [teachers] who deceive themselves that they have all these years been deciding what young people under them do learn.”

The learner's need or goal is the important factor in learning. A person with a clearly defined purpose in life sooner or later will perceive the needs, or the succession of needs, whose satisfaction will lead him toward his goal. A cogent example is the student who decides to become an engineer. He learns very soon that to satisfy his long-range ambition his immediate need is knowledge of mathematics. Before he decided to become an engineer, he may have had no interest or drive to learn mathematical processes and formulae. His aim may have been just to pass, “by the skin of his teeth,” each required course. Following his decision to become an engineer he has a motive for the study of mathematics which should enable him to learn this subject more effectively.

(2) *Unfelt needs.* Unfelt needs are usually those which are prescribed for the individual by others. They have not yet entered his consciousness. Until he is aware that a need exists, the individual does not strive to satisfy it. A person may need vitamin A without knowing of his need. Diagnosis by a physician may make him conscious of this deficiency. Most colleges prescribe a course in biology for freshmen. Some students do not feel the need for studying biology. Even though the

experiences of others have shown that knowledge of biology is essential to an understanding of man's life and these students might agree that its study is necessary, nevertheless this course is an unfelt or, at best, a mildly felt need so far as they are concerned.

In their book, *A College Curriculum Based on Functional Needs of Students*, Heaton and Koopman point out that:

"A . . . favorite topic of controversy has been the relative importance of immediate needs and of adult needs. . . . The college student is already a participant in many adult activities. He is giving much attention to his plans for life-vocation, marriage, and other adult relationships. He resents any limits upon his own activities which even suggest that he is 'too young' to do as he pleases. Even though he may not be able to function in the full relationships of adult life, his interests are widening to take in more and more of the future." (2)

The differences that arise between the plans of parents and teachers for a student and the student's own ideas of his needs always create a problem. Adults, from their experience, tend to plan for students in terms of the distant future, whereas students may focus their attention on that which is of immediate interest to them. Future needs may thus remain unfelt. Whether a need is felt or unfelt determines for the individual the attitude and action that he will take in any situation. The felt or conscious need determines one course of action, while if a person is unaware of his need, he has no drive to satisfy it. Proper guidance and counsel may provide the means for the need to be felt. Guidance is a process of clarifying needs and of helping to arrange situations to satisfy them. Thus guidance frequently becomes a student need. One

student may be so greatly interested in the school's athletic program that he lacks the drive or conscious need to study; another may be so engrossed in academic work that he neglects the needs of his body and mind for exercise and relaxation. Guidance may be helpful in both cases.

If each individual had the power to analyze that which he needs most, could he not direct his aim in life better? The answer is apparent in the cases of two college freshmen who wrote on the subject, "Why I Am in College." The first said, "The man who has an aim in life — who is looking ahead into the future — finds college hard, but a pleasure, for he is working for the betterment of himself and also the security of his future." The second said, "I am in college because it is my parents' idea." The dissimilar points of view of these two young men accurately reflected the differences in their individual abilities to analyze their needs. College was a felt need for the first student and an unfelt need for the second.

The preceding paragraphs offer two large and very general classifications of needs. To bring about a better understanding of the importance of needs in personality development, a further and more specific classification will now be undertaken.

Origins of needs

Like the water from a fountain, needs must spring from somewhere. To know needs and to understand them, it is well to know the sources from which they come. It is generally agreed among educators that in respect to origin there are four basic classes of needs: (1) biological demands, (2) needs arising from social situations, (3) personal desires, and (4) the interrelations of all the needs of the personality. We shall treat them in this order.

Students Have Needs

(1) *Biological demands.* Of the basic needs of each individual, biological needs are primary. To maintain life, any organism must have food and drink. The body needs air, its temperature must be regulated, it needs rest, and it must eliminate waste material. In addition to these processes for sustaining life, there is the need to continue life, or the sexual urge.

Biological demands arise from the attempt to satisfy physiological desires or instincts. When these needs have been satisfied, there is a general feeling of pleasure or satisfaction on the part of the individual. It is characteristic of every need that when it is satisfied the drive to which it gave rise becomes dormant. For example, hunger is an internal tension felt as the desire for food. After eating, the hunger is gone and in its place is experienced a feeling of pleasure or satiation.

Man's biological demands for food, air, water, proper temperature, sleep, excretion, activity, rest, and sexual gratification follow the lines laid down by what have been called "instinctive" patterns. After these needs have been satisfied day in and day out, the particular needs are changed somewhat, being replaced in part by habit patterns which are largely unconscious. When these basic human needs are not readily satisfied, frustration occurs; there is a drive or an urge to satisfy them and a tension occurs if they are left unsatisfied or unmet.

(2) *Needs arising from social situations.* Prescott effectively states the importance of social needs when he says:

"The social needs of the individual grow out of the fact that life must be lived in contact with other people. Only by establishing and maintaining satisfactory relationships with persons, organizations, and institutions can the individual obtain optimum conditions for continuing his

physical life, for establishing and maintaining a family of his own, and for realizing the various potentialities of his own personality. Certain conditions loom so large in his task that they amount to basic needs for his developing personality.” (4)

This concept of social needs offers us as individuals another method for understanding ourselves in relation to others. Social needs have their foundation in the background and culture of a people and they are always powerful and dynamic.

There are needs in a democracy that do not exist in a totalitarian state. The need for “free speech” is the fundamental basis for the existence of a democracy — its very life blood. In a totalitarian state the reverse, or disciplined acceptance of what is told the people, is necessary. At the base of the satisfaction of any governed group is the philosophy that constitutes the needs of the group. These needs are determined by the group’s education and background.

The social need for “belonging” is closely allied with the personal need for affection. Anthropologists, sociologists, and psychologists point out that man is a gregarious animal. To belong to a group is a definite need for most people. Fraternities, sororities, cultural and religious societies, athletic teams, and other kinds of groups meet this need for group experience. Such groupings come about naturally in the life of the individual. There are earlier forms of gregariousness far back in racial history. Primitive man had his clans and sub-clans. To belong is to be accepted by others; to be accepted contributes to one’s well-being.

Akin to “belonging” is the desire to be like others. This is a common need. It helps the developing person-

ality in relation to the social group to realize its desire to be like others and to be superior to others in some ways. And the desire to be, in a degree, different from others adds up to the same need, which is to win social approval. Even if being different extends beyond the desire for social approval it is an expression of a closely associated need — the need for gaining attention. Most men dress alike, and for the same reason that women follow the accepted style. Neither wants to get too far off the norm. Most persons can stand being different only so long as this brings social approval. Our need for being like others is satisfied as long as we maintain our acceptance by the group.

Clashes sometimes occur between biological needs and the social needs of an individual in his society. For example, a revolution which may destroy a whole social order can easily arise out of the need of a people for food. Should a man steal a coat to keep himself warm, society, with its man-made laws to protect the group, would probably punish him for stealing and would take little cognizance of his need to keep his body warm. Or should a coed return to her college living quarters after the hour allowed by her social group, she would be reprimanded and probably punished, not because she missed needed sleep but because she broke the social law of the house.

(3) *Personal desires.* Distinguishing between personal needs and social needs is difficult because there is as yet no scientific scheme for classifying needs without some overlapping. This means that in this discussion our organization of needs must necessarily be an arbitrary one. We are on safer ground when we note the development and transition of needs; namely, that one need may succeed or be the outgrowth of another. But when we try to classify them the result is not so clear.

Over a period of years the writer has asked successive classes of college freshmen to write on the subject, "Why I Am in College." The assignment could just as well have been, "What Are My Needs for College?" If we think of our group as any one hundred among the many freshmen who have answered this question, we find that 80 are seeking vocational preparation, 55 mention friends as a need, 50 express a desire to learn to "get along with people," 40 feel the need to "get ahead of the other fellow" — that is, to meet competition — 33 want more knowledge, and 33 feel they need a place to build more social contacts. The desire for self-reliance is mentioned frequently.

Regarding specific personal needs, about 85 per cent of those students who mentioned friends, when questioned in more detail, expressed an inner need for affection. It is generally known that in infancy the greatest need, after the biologic demands have been met, is mother-love. It is quite possible that a need for affection is due to the transference of this expectation of or desire for mother-love to other human relations as they have matured. No doubt some individuals need love and affection more than others in order to feel secure. Most individuals crave affection; this is a personal need.

Personal health is obviously a basic need for everyone. It is better to be wholly alert than to be only half so. Common knowledge and experience show that we are more efficient and effective when we feel well. Health, both physical and mental, is a personal need — one which is most likely to be satisfied if the rules of health are obeyed.

There is a strong relationship between actual bodily habits and emotional attitudes. To apply one's knowledge regarding health is something no one can afford to

neglect. Therefore, it is evident that health knowledge, to be effective, must be a felt, or conscious, need.

(4) *Interrelation of all the needs of the personality.* There are needs which, when satisfied, serve to integrate or tie together our personality traits with our activities in life. These needs are not recognized as readily as are biological needs. They are similar in some respects to both social and personal needs, which, as we have noted, tend to overlap, but we shall find as we proceed that these integrative needs deserve a classification of their own.

Psychologists and psychiatrists are now at work on functional ways of getting vital facts regarding needs into the area of humanized, layman's knowledge. It is necessary to understand the meaning of the terms "integrate" and "integration" in order to make use of this knowledge. As we discuss needs and note the numerous ways in which they overlap, we find that this apparent overlapping is simply an integrative, or working together, process. This is because needs succeed one another and grow out of each other.

Using Prescott's suggestions regarding "ego and integrative needs," we shall discuss seven of these needs: (a) facing reality, (b) harmonizing with reality, (c) a workable philosophy of life, (d) increase of self-direction, (e) balance between success and failure, (f) attainment of individuality, and (g) a general feeling of security. That these needs are integrative in nature and that they must correlate with other needs is apparent from inspection. When they are satisfied in an individual, he usually is adequately adjusted to most situations. This, then, is the purpose of bringing forward the whole discussion of needs.

(a) *Facing reality* is a significant integrative need. Many stumble because they do not recognize it as a need.

Some of the specific types of failure to face reality are procrastination (putting off the disagreeable), evading issues, and avoiding responsibilities. The need to face reality is as important psychologically as the need for food is imperative biologically.

To contact or to face reality requires that the individual must work with himself. For example, a person sometimes unconsciously evades an issue. When he does so, he weakens his will for the next encounter. Take the case of a student who has developed the habit of procrastination and puts off doing his work. If he lacks the ability to do the work he is face to face with an unpleasant fact. He may make the usual excuses, because the problem of incapability is one of the hardest to face. However, suppose the issue is not a matter of ability but one of inertia. The student may say, "I'll turn over a new leaf and get my work done on time." In carrying out this resolution, his refusal to make an excuse and his recognition of his habit of procrastination is evidence that he is contacting reality and facing the facts. Promptness here is the satisfier of the need which procrastination stimulated, just as water is the satisfier of the need stimulated by thirst. If he does not make good on his promise to himself to substitute punctuality for laxity and if he makes excuses for his failure, it will be more difficult for him to face the reality the next time. When the need for contact with reality arises and is understood and faced, it integrates and correlates many other activities of life.

(b) *Harmonizing with reality* is another integrative need. It has to do with problems in life that are beyond our control. Each individual has a need to harmonize or adjust himself to his own situation in life in order that he may have a happy and unfrustrated existence.

Everyone must meet crises at some time or another.

At such times the need is for the ability to harmonize with actuality. The first need in this relationship is to face reality; the second is to harmonize with that reality. Such a crisis as a death in the family, financial reverses, unemployment, a rift in a love affair or in a marriage, or a vocational failure creates a need for harmonizing with reality. The actual happening is the stimulus that demands the recognition of the need. To illustrate, we may take the case of a freshman girl whose family suffered severe financial reverses soon after she entered college. Here was a circumstance entirely beyond her control. What should she do about it? To sit down and cry would release the emotional tension temporarily, but the ultimate solution of her problem lay in recognizing her need and harmonizing with the fact that she must either leave school or secure funds to continue college. This girl went immediately to the college employment office and was fortunate enough to secure employment as a reader-companion for an elderly person. In return for this service she received her board and room and some expense money. Thus she was able to relieve her father of worry about her and to finish her college year without further financial help from him. After facing the reality she harmonized with it (adjusted herself to the situation) and thus satisfied the need.

Before the Second World War, Great Britain, through her ambassadors, attempted to avoid war by appeasing Germany. Soon the stark reality of a situation beyond human control had to be met. To save England, the government had to bring the attitude of her people into harmony with reality. This meant preparing to fight. Individuals can do nothing in such a situation except adjust themselves to the situation by preparing for any emergency.

(c) *A workable philosophy of life* is an interrelating or integrating need which is apparent to anyone who gives the matter a moment's thought. Whether or not we realize it, each of us forms concepts based on values. In building our background for personality development, the placing of true values in life is of paramount importance. For example, a young man of small stature placed his values on the "wrong horse" when he attempted to enter organized athletics, such as college football, to satisfy his need for recognition. Intellectual pursuits were much better suited to his body build and mental equipment. He had misplaced his values.

One does not have to be highly intellectual to have a philosophy of life. It is not necessary to make a formal study of the subject in order to form a philosophy. Life philosophies are of many sorts and all degrees. The need is to have one that is workable. Everyone has one, but few ever systematize it. One's philosophy is expressed by his actions. One can review the philosophy of another person, but only by interpreting it from the actions and conduct of that person. Our philosophy is expressed in our pattern of behavior, which serves to give the core or meaning to life.

We must have faith in something. In building a philosophy or a belief in certain values we develop standards by which to guide our lives. This philosophy is a need which correlates with other needs. In times of stress and strain most persons have need for fortitude; under such circumstances a belief and a philosophy will satisfy the need. An individual without a workable philosophy is like a boat without a rudder.

(d) *Increase of self-direction* deals with the ability to direct one's own life. Self-direction assumes the acceptance of responsibility independently of others. It repre-

sents self-reliance, or the ability to stand on one's own two feet. It is a distinguishing mark between an infant and an adult. Self-confidence, which so many students long for, is the need that is satisfied when there is an increase in self-direction. As truly as "belonging" satisfies the need for security, increasing self-direction satisfies the need for self-reliance; then mother's apron strings are untied and father's pocketbook is no longer needed.

The desire for maturity in judgment, to be grown up, or to arrive at the stage of maturation, is the need for increase of self-direction. It coördinates and integrates every other need of human beings.

(e) *A balance between success and failure* is an integrative need. Life is a series of problems which tend to become more and more complicated. One should not expect life to be a succession of successes or to be made up entirely of failures. Too much of either kind of experience tends to warp the individual's personality. The need is to arrive at a balance between the two.

Success and failure are factors which determine to a large extent an individual's status in the society in which he lives. The individual's overt actions and his emotional reactions are governed by the environment in which he finds himself. The environment of college campus life gives rise to forces which play definite rôles in controlling the student's behavior on the campus. A student may feel that he controls his own actions, but his actions are modified by the thinking, customs, and social institutions such as the press and radio, which constitute the environment in which he works and plays.

The need for a balance between success and failure is satisfied when the individual develops the capacity to meet situations and problems in which these elements

are present. The professional actor seems to need applause and continuous public acclaim in order to carry on. Finally he requires it so much that he cannot stand failure. Great athletes and persons much in the public eye often lose perspective regarding balance between success and failure. The requirements for meeting this need constructively are intelligence, temperament, and experience.

(f) *Attainment of individuality* is the recognition that one's self is a unique personality with distinctive characteristics. It is the sensing of one's own personal worth. It is finding one's self in both the personal and social senses. It requires a clear definition of one's goals.

To satisfy the need for individuality one must perfect some activity to such an extent that he "knows he is good" at it. The resulting self-confidence is not conceit; it is the attainment of selfhood or individuality. One may have general competence, which is valuable, but this must be fortified by special competence in some one activity or vocation which satisfies the need for individual attainment. This need does not conflict with the needs for "belonging" or for being like others. The ability to play the piano well adds to one's popularity in any group; the athlete with real prowess stands high with his fellows. If a person develops ability in mathematics or in chemistry he must be so competent in that pursuit that his need for individuality is satisfied. As he attains special competence he receives recognition from others and this leads to self-confidence.

How often do we ask ourselves this question, "How much self-assurance do I have?" It is amazing when we learn from analyzing various symptoms how much we lack relatively in this attribute. The Commission on Secondary School Education, in a book entitled *Science in General Education*, poses these test questions:

"Does the student always skip over situations in which his own personal development (physical, social, or mental) might become the topic of discussion or investigation?

"Does he always omit mention of physical development, of secondary sexual characteristics, of height or weight or complexion variations?

"Does the student spend a good deal of time showing off, defying discipline, knowing it all, boasting?

"Does he habitually bluff or lie?" (1)

The Commission continues:

"Positive answers to these questions may mean little, but when behavior of this type is coupled with serious deficiencies in the same person's social life, then it may well be suspected that self-assurance is to some important degree lacking." (1)

Self-assurance, self-sufficiency, and self-confidence, all are factors in this need for attaining individuality. A person's background has much to do with his possessing or lacking these traits. For example, if a student grew up under conditions where he was alone a great deal and learned to provide for himself in various ways, a certain kind of self-sufficiency would be present in his make-up. However, he might develop a feeling of being ill at ease or a sense of loneliness when with others. If, on the other hand, his environment has been such that he had continuously associated with other people in all his activities, he might find himself lonely without them. If one is naturally shy in the company of others, this personality trait is not necessarily remedied by forced association with others. The need is to develop individuality which possesses self-assurance in all situations.

(g) *A general feeling of security* is another integrative need. It cuts across all needs. We have discussed the personal need for affection and the social need for "belonging" as factors in the individual feeling of security. It is now common knowledge that a person usually is well adjusted, more effective, and happy when he feels generally secure in his world.

From enumeration of the various needs that people have, it is evident that financial security is not the whole answer to all personal problems. Even though many believe money will buy all the security they need, those who have the good fortune to have plenty of money find that there are many things it will not buy. There are other factors in life needed to contribute to a feeling of security. For instance, the student in college who is financially secure may not feel socially or academically secure.

Individuals vary greatly in their requirements for a general feeling of security. This need may stimulate some individuals to satisfy it by making friends, others by improving their health, and still others by diligent vocational preparation. To feel generally secure is a need that implies the satisfying of a whole succession of needs. It is clearly integrative because it interrelates with many other needs of the individual.

This and other integrated needs serve to shape one's actions, and if satisfied they tend to eliminate frustration, defeatist attitudes, and unhappiness.

Failure to satisfy needs

We now know that the greatest driving force in the world is a need. There are some things we want so much that we will make great sacrifices to gain them. We feel a need that must be satisfied, and if we fail to satisfy

[42]

it in one way or another we tend to become frustrated. Murray says in his Harvard study:

“Failure to attain the goal often leads to two kinds of dissatisfaction: that arising from the frustrated, perseverating [persistent or recurring] need and that arising from the failure of the achievement drive (‘I was not able to do it’). For example, a man who is jilted by a woman may lose self-esteem as well as the desired object.” (3)

A biologic need like hunger will be satisfied some way. If an individual is obstructed, he may even steal to appease the need. But take the case of two young people in love. They desire to marry. Perhaps the girl’s parents refuse consent and do everything in their power to stop the match. What then? The more the young man and the young woman are thwarted in their plans, the more frustrated they become. If the parents are successful in their efforts to avert the marriage, their daughter may never marry. Her whole life may then become one of frustration. That is how powerful a biologic need for love may become. This basic need often progresses into other needs, such as one for a vocation. The daughter may take up a vocation, but case upon case can be enumerated where failure to reach one important goal has affected the satisfactory attainment of other goals. Love for a person does not transfer easily to love of a vocation. When we examine examples of failure to satisfy needs, it becomes clear that more than one dissatisfaction may arise. That is what makes the satisfying of needs so important.

What can be done about needs?

First, needs must be identified. If the young woman who was frustrated because she could not marry knew

that her feeling of defeat was caused by failure to satisfy a specific need, could she do anything about it? With the full knowledge that every satisfaction in life is the direct result of satisfying a need, she should be able to resolve the conflict. Here she was faced with a biologic need for mating, which is the strongest of all human drives. Should she become aware, upon self-analysis, that her parents had always dominated her life, her need would be one of expressing her own individuality. If she found that she was unable to build up her self-confidence and overcome the submissiveness of her nature enough to find happiness in any action which involved defying her parents' wishes, she could face that fact and harmonize with it by putting aside thoughts of marriage with that particular person and by developing other and diversified interests. Being apathetic and making no effort to adjust oneself to a situation results from failure to increase self-direction and to work out a philosophy.

This would indicate that the total solution of such a problem, as with any other problem involving needs, is based on an analysis of the need that is to be satisfied. We realize, then, that there is more than one way to satisfy a need or to resolve a conflict between needs. Problems evoked by needs are basically mental-health problems.

To know and to recognize a need is but to face reality. A conflict may arise between a social need like the need to pay taxes and a personal desire to avoid them. The government, whose concern is for the entire social group, requires funds in order to operate. Persons, individually or in groups, in the struggle to satisfy their own personal needs for conserving their money for other purposes, often resent the social need for taxation. The obvious need here is to gain full knowledge of the principles of

government and taxation so as to understand the necessity of and values to be gained from taxation. It is a problem of facing reality and harmonizing with it.

It is well known that tensions develop from social classes and social distinctions. Vocations and professions tend to stratify into social levels. A study of 1300 students in a *Report on Problems and Progress of the General College* at the University of Minnesota indicates that vocational choices of students tend toward higher brackets than the occupations of their fathers. Statewide studies in Maryland and New York indicate that this probably is a universal trend. In a democracy this drive is quite naturally accentuated by the many available opportunities. It is a need that must be recognized. If one becomes aware of this need within himself, he can take precautions to prevent failure by making a thorough investigation of the field of his chosen vocation. Its requirements must be learned, opportunities for advancement must be studied, and difficulties due to his own personality traits and other factors must be considered.

"Keeping up with the Joneses" presents many trying problems. Difficulties due to striving to live beyond one's mental, physical, or financial means are not limited to students but continue to be a problem throughout life — unless needs are solved adequately. Psychologists, psychiatrists, and good counselors are able to assist individuals in resolving needs that are in conflict or are not conducive to happy living. Effective guidance is based upon the ability to understand needs and to assist others in solving the problems evoked by them.

(The remainder of this book is built around various student needs. An attack upon their solution is found in some form in every remaining chapter.)

Needs in review

In industry today any factory must be efficient in order to stay in business. At the first sign of failure, the modern company makes a survey of its needs. This procedure is a definite one and can be worked out systematically.

How often does it occur to individuals who are not efficient or who are ineffective physically and mentally that a survey of their needs may be beneficial?

Needs group themselves into two large categories: felt needs — those of which we are conscious; and unfelt needs — those of which we are not aware. In all effective learning the specific need must be felt — the individual must be conscious of it.

While some needs are basic and universal, the particular needs of each person vary. Needs of each individual arise not only out of his biological background, but also from his cultural background. Biological needs such as those for food, water, air, and shelter require immediate and continuous or recurring satisfaction. Other needs are long-range in their effect. To study subject matter that prepares one for a future vocation is an example of the latter type of need. Another need is the cultivation of friends, who satisfy the personal need for affection and the social need for “belonging.”

The sources from which needs arise have much to do with the way the individual satisfies them. The four basic sources have been described in this chapter.

Needs follow and depend upon each other. One need often causes another. Needs frequently are in conflict. Conflict affects the ways in which they can be satisfied. It is the satisfying of needs that leads to pleasure, a feeling of creativeness, and, in the larger sense, happiness. Failure to satisfy needs causes frustration and lack of achieve-

ment. To avoid consequent defeat, the individual should learn to face and harmonize with reality, to develop a philosophy suitable to his goal in life, to acquire self-direction, to adjust himself to success and failure and arrive at a balance between the two, and to strive for individuality and a general feeling of security.

Psychologists have recognized the concept of needs as a method of studying individual personalities. The more effectively they can classify and diagnose needs, the better they can use them for the direct benefit of mankind. Psychiatrists have been studying needs (drives) for a long time in connection with the diagnosis of mental ills and frustrations. The time is near at hand when the knowledge of needs will be common property of all who go to school. The layman will use the concept of needs as a part of everyday usage and will derive much value from it in self-analysis and direction.

When we learn to know our own needs we should be better able to understand the needs of others. Good human relationships are founded basically upon enlightened recognition of self-interest. When human beings perceive that the satisfaction of normal needs renders their existence happy and effective, they will translate this knowledge and apply it to the treatment of others. The Golden Rule is a familiar example of this way of life. It is no exaggeration to say that the future of human civilization may depend in no small part upon our ability as individuals to understand the needs of others and, as a nation, to determine our foreign policy upon this enlightened concept.

SUGGESTED FURTHER READINGS ON THE SUBJECT
OF NEEDS

1. Commission on Secondary School Curriculum. *Science in General Education*. D. Appleton-Century Company, Inc., New York; 1938. Pages 88-89.

This book of 591 pages written for teachers has such fine material in it that students will find it interesting reading. In Part II the subject of needs is discussed in detail. Other reports of this Commission, listed on the next page, give more information about this new approach to an understanding of personality development.

2. HEATON, KENNETH L., and KOOPMAN, G. ROBERT. *A College Curriculum Based on Functional Needs of Students*. University of Chicago Press, Chicago; 1936. Page 43.

This book of 157 pages was written for teachers and educational administrators, but the style is non-technical. Chapter III, entitled "Functional Needs of Students," provides valuable reading for students. In the Appendix is a detailed outline of needs in three areas; namely, social, personal, and family relationships. This outline is well worth studying, as it shows in simple, clear form the relation of our various needs to our personality development.

3. MURRAY, HENRY A., et al. *Explorations in Personality*. Oxford University Press, New York; 1938. Pages 61, 65, 61-64, 92.

This book of 750 pages is one of the most thorough and carefully reported studies in the field of personality. Chapter II includes an excellent report on needs. The book contains a description of and the results of a clinical and experimental study of fifty men of college age at Harvard University. Twenty-eight psychologists, among whom were three physicians and five psychoanalysts, were engaged in this work over a period of three years. The book provides fascinating although not easy reading.

4. PRESCOTT, DANIEL A. *Emotion and the Educative Process*. American Council on Education, Washington, D. C.; 1938. Pages 113-125, 116.

This book of 300 pages is sufficiently non-technical for student reading. Chapter VI, "Basic Personality Needs and Conditions Which Frustrate Them," constitutes the backbone for our discussion of this subject. The book provides excellent background reading in the field of personality and emotions. Also, it contains an excellent bibliography for use of students of medicine, psychology, and social sciences.

Other useful books in this field are:

Commission on Secondary School Curriculum. *Reorganizing Secondary Education: Part II*. D. Appleton-Century Company, Inc., New York; 1939.

— *The Social Studies in General Education*. D. Appleton-Century Company, Inc., New York; 1940.

DOLLARD, JOHN, et al. *Frustration and Aggression*. Yale University Press, New Haven; 1939.

DOOB, LEONARD W. *The Plans of Men*. Yale University Press, New Haven; 1940.

RUCH, FLOYD L. *Psychology and Life*. Scott, Foresman & Co., Chicago; 1937.

WILBUR, RAY LYMAN. *Human Hopes*. Stanford University Press, Stanford University, California; 1940.

Chapter

3

TO LEARN IS BOTH AN ART AND A SCIENCE

*"Learn to live, and live to learn,
Ignorance like a fire doth burn,
Little tasks make large return."*

BAYARD TAYLOR

ALL human beings possess ability to learn. From the day of his birth to the end of his life, man continues to learn. Learning may be defined as a continuous, lifelong process of mental and physical growth or development. It also may be described as a constant state of "becoming." What one as a personality is to be, he is now becoming.

We learn when response is adequate

What does the average college freshman know about learning? If he stops to think, he knows that in himself the process of learning has been going on since babyhood. He may have been taught that it is the process of acquiring ability to respond adequately in a new or an old situation. The following story shows vividly how learning takes place.

Five-year-old Donald was dining with his parents in a café high up on the side of Telegraph Hill in San Francisco. As the boy looked down he could see automobiles, trucks,

and trains moving along far below. "Oh, Daddy," he exclaimed, "see those little toy cars down there! Can I have one?" His father replied carelessly and in the opportunist vein with which some parents meet youthful desires, "Yes, just as soon as we have finished dinner we'll go and get you one." After this thoughtless response no explanation would satisfy the child, and it was not until he was taken down to where he had seen the cars running that he learned the truth about the situation. It was a shock to him. Some three months later Donald was asked if he remembered the toy cars. His quick reply was, "They are not toys; they are real cars like ours." It is evident that Donald had learned to give an adequate response to a phenomenon which he had not understood previously.

Learning is accumulative

Learning is one of the fundamental problems in psychology. Authorities in this field, including the authors of the best recent books on the subject, agree that there are several basic principles in learning. To understand these principles and to use them is the basis of effective learning. Merely to memorize terms and theorems is futile.

Most learning is made up of everyday experiences which result in the gradual accumulation of information and skills. In action it uses old experiences to solve new problems. Integration is a useful process in learning. By its means, unorganized material to be learned is systematically arranged into working units of higher order. One builds on his foundation of knowledge as a stone mason constructs a stone wall. As one stone in the structure supports another, so one bit of learning integrates or ties in with another. Patience is important to the mason; so for the learner it is one task at a time, each mastered on the basis of previous learning. There are

no shortcuts. Only when facts are drawn together into larger concepts do they take on meaning and become part of the learner's knowledge.

Learning is a continuous process

New learning takes place when that which has been learned previously is sufficiently well understood to provide a foundation. The old learning becomes a springboard to the new.

Happiness or successful adjustment to life is dependent in no small measure upon what we learn and how we use this knowledge in approaching and resolving daily conflicts and problems. Too often learning is regarded as taking place only under the circumstances of formal education. Experiences in the home, the church, the cinema — anywhere outside of school — and ideas and concepts gained from reading magazines or newspapers involve as much learning as does formal schooling. Take as an example a certain student who found out for himself that the reason he was not popular with his contemporaries was that he talked too much. Although learning of this type is not academic it has obvious significance for the individual's future, because it makes possible an improvement in his relations with others.

Schools and colleges have been established for the purpose of facilitating and directing essential learning. The college campus constitutes what might be called a practice society. Mastering life situations in the college setting makes for proficiency in later business, professional, and social life. Every experience contributes to the personality development of the student, increasing his understanding and enabling him to cope with life more successfully. To learn to meet life capably is the most important objective of all learning.

All of life is a continuous learning process; college life is an important incident in a lifelong experience. Placing these years in adequate perspective is a wholesome occupation for the thoughtful student.

Learning involves change

Learning is a reaction to experience; the term denotes action and change. This reaction may be a muscular contraction, flow of a glandular secretion, or any other physical or mental activity in response to stimulation of some kind. Commins points out:

“Learning is not a special kind of mental activity like seeing or willing or thinking. It is the change or transformation taking place within these and other mental processes. If we ask the student trying to solve a geometrical problem to describe what he is doing in terms of mental activity, he will say that he is thinking of the correct solution. His mental activity is one of thought, and it is the change or transformation of his thoughts from one moment to the next that is the learning.” (2)

Any experience or activity into which one enters or to which one reacts involves learning and thereby tends to modify the future behavior, ideals, attitudes, personality, and mental life of the individual. Actually, it may be said that every experience leaves one a little different so that he no longer reacts in quite the same way that he did before.

In these times when the social order is changing rapidly, the student finds himself changing in all aspects of his life as his college years take their course. The age-old concept of college learning as being concerned largely with books and technical skills needs revision. College today prepares for life in all its manifestations — desirable and

undesirable. College brings changes involving attitudes toward life in general and toward particular things.

Biologically, organisms change as they learn, and man is no exception to this rule. An important corollary follows naturally: To the degree that change is resisted, and to the extent that the student does not coöperate or has no positive motivation, learning is proportionally impeded.

Motivation is the basis of learning

That motivation is the key to learning is another principle universally accepted in the field of psychology.

Learning occurs most effectively when the learner is motivated and, in general, it is proportional to the intensity of the incentive or motive. Young has expressed the differences between incentives and motives in the following statement:

“Some of the essential motivating conditions are within the organism; others are within the environment. Thus, if an animal is hungry, the drive stimulus from his contracting stomach is obviously internal. The food object toward which the animal moves is clearly an environmental factor. To distinguish organic from environmental motivating factors, it has been suggested that the former be called *motives* and the latter *incentives*. Thus, desires, intentions, and goal sets are *motives*. Praise, reproof, reward, punishment, money, food, mate, etc., are *incentives*.” (5)

Following Young's definition, it might be pointed out that the need (inner tension) for food is the motive which moves men and animals to seek the incentive or reward—food. A badge of honor is an incentive which motivates individuals to extraordinary efforts, although their ambi-

tions may be the motives which lead them to strive for the honor. When there is an incentive or a motive for doing something, there is motivation to act.

Daniel A. Prescott, in a study entitled *Emotion and the Educative Process*, discusses the strength of motivation in relationship to learning:

“A person is motivated to learn when he has the active attitude of desiring to learn. . . . If the utility of the learning seems genuine and direct, the motivation is strong; if the value of the learning seems doubtful or indirect, the motivation is weak or absent.” (3)

Needs tend to continue as motivating forces in learning until there is satisfactory adjustment on the part of the learner. The student who desires to make friends, for example, will work toward this goal until friendships are achieved. This principle holds equally in the social and academic realms. The college student, therefore, with a definite need or goal of which he is completely conscious finds learning much easier than does one of equal ability who goes to college against his inclinations.

Extrinsic and intrinsic values in motivation. Often the motivating force in learning has its origin, as Young indicated in the above quotation, in incentives foreign to the learning situation itself and of little ultimate satisfaction, such as grades, or prizes, or admission to an honor society. These rewards may be classified as “extrinsic” incentives. While perhaps not ideal, these are important factors in the learning of all individuals. However, it is doubtful if learning is relatively successful or permanent when the only incentive is an extrinsic one.

Should the student recognize the subject as serving his own vocational need, he may apply himself to it vigorously with his future welfare in view. It then has meaning

and value. When, as in this case, one learns because he has a drive to know something about the subject, the motive is called "intrinsic."

When learning is taking place, usually more than one motivating force is present. A student may strive to learn in order to obtain good grades in a subject, but he may be motivated further by his vocational ambition. Other factors being equal, the larger the number of drives that can be satisfied by a learning response, the more effective will be the learning. A person with well-defined purposes in life, provided they are not in conflict with each other, tends to find learning easy.

Interest and meaning as factors in motivation. Interest is one of the strongest factors in motivation and consequently in learning. Consider the courses that you have liked and the ones that you have disliked. Which was the most interesting? Which was the easiest to learn? Is there any relationship between your interest in the subject and the extent to which you found it valuable? Courses in which they are interested are easy for most students and carry the most values.

Learning is also facilitated when the motivation is lodged in the task itself, as when one learns photography in order to develop his own pictures. If one is learning to make a radio stand, he does a better job and enjoys the work more if he has definite plans for using the finished stand than if he is making it merely to satisfy a requirement for a passing grade. In the chemistry laboratory students for some reason delight in extracurricular mixing of explosives, but an experiment to prove what is already set down in the textbook is not so enticing.

Material has meaning when it meets one's needs or can be associated with past or present experiences. Students who learn a language by living at a *pension* in France or

with a family group in Germany tell us that the first big progress is made at mealtimes. Here the need is obvious. Hunger makes it necessary to learn the names of foods which are not within reach. Under such circumstances the student becomes highly motivated to learn the language. This is not greatly dissimilar from the case of the rat which learns its way out of the maze for a food reward. Also, if the language has been studied in school, putting it into practice by talking with a foreigner or visiting a city where the language is spoken adds greatly to the satisfaction of such an experience.

Most students find great difficulty in learning isolated facts. History may be insufferably dry and textbook facts hard to learn if one is merely getting ready for an examination in the subject. But if the instructor in his lectures, or the student himself, relates the facts of history to current happenings showing how past events affect our present civilization, the study of history may become most interesting and meaningful. When concrete insight into material is gained, or when meaningful relationships of facts in larger wholes or patterns appear, learning is stimulated.

A student who spends some time during study in relating the material of one course to other courses finds that this makes learning of new material easier and that he is able to remember it longer. For example, preparing a speech in a public-speaking class from live material in history, science, or other courses relates the work and integrates it into larger concepts. Learning is a dynamic, creative process which uses meanings and insights — with or without previous experience — in thinking, planning, and acting. It is not a passive process of drill or repetition without accompanying meaning; such activity results in temporary learning only.

Long- and short-range motivation. It is evident that the strongest motivating force in college is the desire for that knowledge which will lead to success in a chosen career. Fortunate is the student who has this long-range motivation. Other students may have only short-range motivation. For example, a student may be fascinated by photography, and set out excitedly to take pictures as a hobby. His desire is real and tangible in his life for a time, but it is a casual or transient interest. This would be described as short-range motivation. If, however, as time goes on this student's interest in photography becomes serious, he may turn to chemistry and physics for additional information. In that case the motivation has become longer in range. In study this matter of long- and short-range motivation is highly important.

It is evident, then, that successful students develop numerous interests, purposes, and goals. The following story illustrates the effects of these motivating factors.

Carlos felt that he needed more training in his chosen profession than he could get in the small South American country that was his home. He therefore came to the United States to attend college. As he had no knowledge of English, he engaged a tutor. In his first lesson in English this little jingle captivated Carlos' attention: "Just a little every day, that's the way." From this he caught the spirit of patience and persistence, and it was not long until his tutor said to him, "Carlos, you are a joy to a teacher's heart. You learn readily because you are motivated to work." Noticing a puzzled expression on Carlos' face at the word "motivated," the tutor added, "When you are motivated you are incited or moved to action; that is, you have a strong desire to do something about it." "Oh, I see," said Carlos, "I desire to learn

English so I can do my other work so some day I can do my job good, and that is why I do something about it."

Carlos had real motivation for learning English. He was moved to action because he needed English as a tool for mastery of other skills which would prepare him for his chosen vocation.

Individuals who desire to become writers or business or professional people, or those who for the time being wish only to be good students, as a matter of technique in learning should determine their motives and incentives and thus become intelligently motivated.

Capacity, efficiency, and effort in learning

There are, of course, limitations to the native ability of the individual to learn. Few students, however, work to capacity. Every human mind has resources yet to be developed and used. Industry's cardinal principle of efficiency — elimination of waste motions — applies to learning as well as to doing.

Granted that there are individual differences in native ability to learn, we can assume that most students who meet college entrance requirements have the potential capacity to do college work. Some students, however, select fields of study which are beyond their abilities. When this occurs, even strong motivation may not enable the individual to learn effectively. The essence of wisdom for the student is to recognize his weaknesses as well as his strengths and to seek guidance from those who are qualified to help him. To force oneself beyond capacity causes discouragement which leads, as is well known, to feelings of inferiority and inadequacy. The wise course in such a situation may be to change fields of study.

Ordinarily the situation is reversed. Most college students work below capacity and need to cultivate greater

efficiency. Efficiency is the ratio of work accomplished to time consumed by the student in producing it. A student with a dogged determination to get somewhere seeks to find out how efficient he is; one who never measures his efficiency may be unaware that it is below par and so may go plodding on without accomplishment. Failure in college can be avoided in many cases if the student will make the effort to find out why his work is unproductive.

A fortunate minority of college men and women work efficiently without being conscious of the nature of learning. Others feel a great need for improvement. These should be told that learning follows definite, known laws, and they should be encouraged to apply these laws in their learning. Efficient learning is vitally important to the college freshman who is concerned with the profit and enjoyment to be received from his college years.

The laws of exercise, association, and recency in learning

The *law of exercise* in learning states that retention is strengthened each time that the learner responds to a given stimulus. Repetition that leads to the development of insight or meaning has value. It is now generally recognized, however, that repetition of meaningless material, or repetition beyond a certain point, adds little to learning. The law of exercise is important chiefly in learning mechanical skills such as using a typewriter, driving a car, riding a bicycle, or skiing.

The *law of association* in learning refers to the process of associating facts or ideas and their relationships. We associate ideas when they are similar or in sharp contrast, or when they occur almost simultaneously or in the same place. In other words, one thing reminds us of another. Other conditions being equal, numerous, frequent associations lead to more effective learning.

The more recent the association, the easier it is to recall the material. Many students in psychology call this the *law of recency*. To avail himself of this law of learning, the student must carry out frequent reviews. If knowledge is used often, it is easier to recall. Knowledge not used, or not applied to new situations, is likely to be quickly forgotten.

The conditioned reflex or response

In connection with the principles of exercise, association, and recency in learning, the findings of Ivan P. Pavlov, a great Russian physiologist, who in 1902 reported his conditioned-reflex theory, signalized a new approach to the psychology of learning.

The law of association of ideas has long been known, but the association of sensations such as taste and sound is comparatively new to our knowledge. It is now known that when the stimuli of sound and taste occur simultaneously, they become associated. Here again, "the more recent the association, the easier the recall."

Knowledge of basic facts in this field comes, interestingly enough, from investigations in animal psychology as well as from human psychology. Burnham, in his book, *The Normal Mind*, relates the following classic examples of the conditioned reflex:

"If you give your dog a piece of meat, a secretion of saliva occurs. The stimulus of the taste or odor of the meat is followed by the secretion of saliva as a response. This is an ordinary medulla [lower brain] reflex. If, every time you give your dog a piece of meat, you ring a bell, after a while you can ring the bell without giving the meat, and, nevertheless, there will be a flow of saliva. The sound of the bell has become associated with the stimulus

of the meat and produces the same physiological reaction of the gland.

"Again, if we place before the dog's nose a glass with very weak sulphuric acid, he does not react at all. But if we spray the acid solution into the dog's mouth, after a short latent period a violent secretion of saliva occurs. After a time, if we merely show the dog the glass filled with the sulphuric acid, then the saliva begins to flow. In this case the sight of the glass has become associated with the stimulus of the acid and produces the same response. Such an associated stimulus is called a conditioned, or associated, stimulus, and the reaction produced, a conditioned reflex. In this case, according to Pavlov, the association is functioned by the brain cortex [outer layer of the gray matter]. . . .

"Pavlov and his students have shown that every impression from the external world for which an animal has perceiving organs, such as a tone, whistling, noise, heat, mechanical stimulation of the skin, movement, and so on, is capable of association to produce a conditioned reflex." (1)

Learning implications found in investigations of animals are often applicable to human beings. All learning starts somewhere in the conditioning of the individual's responses. For example, Marguerite W. Johnson, in her book, *Verbal Influences on Children's Behavior*, draws the conclusion that "Pleasant requests are more advantageous than scolding" in learning. She found, too, that hopeful remarks are much more effective in encouraging children than discouraging remarks, that approval of children's efforts is more effective as a stimulus than disapproval, and that when instructions are unhurried, children work harder than when directions are hurried.

The emotions in learning

In learning, the emotions of the individual play an important rôle and, although their effects are often somewhat intangible, they have certain aspects which may aid the student.

Edward L. Thorndike emphasizes learning as taking place under conditions of "satisfyingness" or "annoyingness" of the situation. Praise or blame, reward or punishment, "satisfiers" or "annoyers," are alternative terms which describe emotional stimuli. When the behavior or response resulting from learning is connected with some pleasant emotion, the process may be facilitated. On the other hand, a sudden emotional reaction such as fear or anger may block associative learning. For example, if one receives bad news while studying, or if during a class session a sarcastic teacher humiliates one before the group, normal associations may be inhibited.

Reaction to approval or success in learning. Learning that leads to a satisfactory adjustment stimulates one to repeat the act. For example, when rats are sent through a maze of paths only one of which leads to a food reward, they soon learn to choose the right path. When the student finds a way of learning that brings reward in the form of better grades, he tends to repeat the behavior. Accompanying the improvement or success is the emotional reaction of being satisfied with the outcome — of being pleased with oneself. Every student has enjoyed a feeling of virtuous well-being after an assignment has been completed satisfactorily.

Reaction to the disagreeable in learning. When a type of behavior is followed by failure, or when it causes pain or annoyance, individuals tend to avoid repeating it. Continued failure, with its resultant feelings of defeat, decreases or interferes with effective learning. Students

confronted with uninteresting or meaningless subject matter, even when they are told that this material will be of value to them in later life, find it exceedingly difficult to work for such future rewards or satisfactions alone. Unless the student is able to work out for himself the need for learning the subject, he will find it arduous indeed.

The extent to which one should be forced, or should force himself, to do disagreeable, uninteresting tasks is one of the big questions before educators today. Surprisingly enough, it sometimes is actually satisfying to a learner to undertake tasks he does not like. Anticipation of future reward compensates him while he is doing the present disagreeable job. For example, if he is seriously ambitious to become an engineer, the student will apply himself to mathematics and chemistry for the sake of reaching his goal, even though he dislikes these subjects.

Learning is not always the result of a satisfying experience. Because of annoyance in a given situation, one may learn to avoid a repetition. For example, C. L. Morgan, in his book, *Mind at the Crossways*, relates that a newly hatched chick picked up a cinnabar caterpillar and found the taste bitter. The chick got rid of this particular worm in a hurry. At the next sight of a cinnabar caterpillar the chick shook its head and did not peck at it. We all have experienced the "embarrassing moment." An elementary pupil reading aloud to the class came upon the word "vocabulary." He hesitated, then guessed: "voc-a-bul'ary." The class responded with a burst of laughter in which the teacher joined. The reader learned rather suddenly how *not* to pronounce the word; he did not make the same error again. On the other hand, if he had guessed correctly, and if the teacher, recognizing the word's difficulty, had complimented him before the class, the praise would have been a factor in the learning.

Readiness in learning

Ability to learn, to a degree not yet clearly defined, is dependent upon the mental and maturity level of the learner. One of the great unsolved problems of education is the determination of the age at which individuals are best able to learn specific subjects or skills. How does one know when he is ready to advance in mathematics, science, or the language arts? When is a person ready for instruction in shopwork, for participation in certain athletic sports, for laboratory work in biology, or for any other field of interest? He is ready when he has reached the level of mental, physical, and emotional development necessary for the specific field of learning. Certain types of learning require greater maturity than others.

The state of readiness or capacity to learn is dependent upon many phases of personality development. The growth process must take place on several fronts — physical, mental, and emotional — and these factors must be coördinated. In his book, *Personality and Culture Patterns*, James S. Plant describes this coördinated development as “the cadence of the individual, the rate at which he ripens, at which he goes through situations, at which he works his way through to some goal.”

We are accustomed to thinking of the average individual in terms of a process of orderly growth. Nevertheless, it is quite possible for an individual to reach the age of twenty-one and still be unable to function as a mature person in many learning situations. A student may be mentally capable of moving into a new field and yet be emotionally immature or incapable of meeting the physical demands of the learning situation. Or he may lack readiness in certain prerequisite work and therefore will fail to attain the desired standards of accomplishment. For

example, a young man who wishes to be an engineer but who finds mathematics difficult, may have native ability but will be seriously impeded by his lack of readiness in this work. Only by mastering mathematics can he attain a state of maturity where he will make progress toward his chosen vocation.

Regarding another aspect of this problem, whether individuals lose the capacity to learn as they grow older, psychologists question the adage, "You can't teach an old dog new tricks." Thorndike carried on experiments for several years with adults of various ages who were studying Esperanto, a proposed universal language. He compared the rates of learning of a group of candidates for the Master of Arts degree whose ages ranged from thirty-five to fifty-seven, with those of a group of young men and women in private schools who averaged about eighteen years. The older group made twice the progress of the younger group. Children from nine to eleven years of age with exceptionally high intelligence were given the same material to learn. Their learning rate was found to be the lowest of the three groups. A possible explanation is that with age individuals reach a state of physical, mental, and emotional coördination in which learning is a habit and a skill.

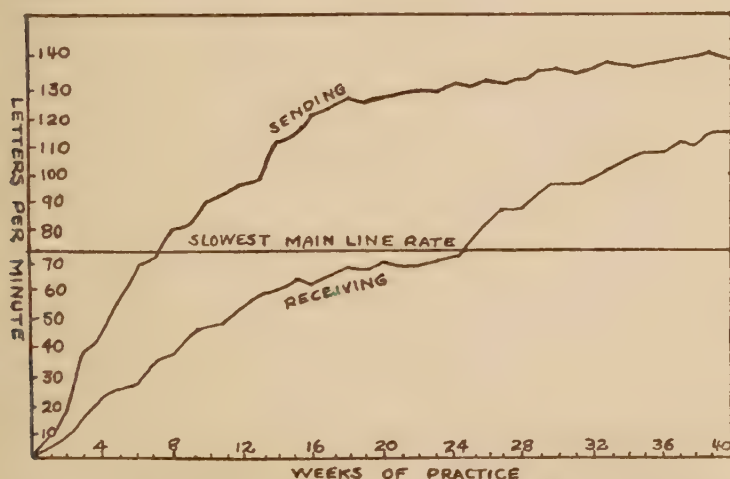
Learning rate plotted on curve

Certain types of learning, when recorded under controlled experimental conditions, can be graphically expressed in the form of a curve. Progress in studies like typewriting, telegraphy, reading, spelling, and mathematics follows this pattern. There are points on such a curve of mental acquisition at which it flattens out. Such an area, known as a "plateau," is important, for it indicates a period of standstill in learning. It gets its name [66]

from its resemblance to a plateau in the contour of land on a profile map.

We may consider two kinds of limits to improvement. One of these is commonly spoken of as the "physiological limit," which on a learning curve is the point at which the curve flattens out and, although continued learning may be attempted, does not ascend again. This is the point at which the learner can make no further progress because he has reached his capacity for learning in that particular field. When learning is not progressing because of lack of ability, this fact becomes a mental-health problem, but there is a solution: Change fields of study. It is regrettable that many students look upon this step emotionally and think of it as a disgrace.

Another sort of limit to improvement in learning is only temporary, a plateau such as that shown in the following chart:



A learning curve for telegraphy. (Individual W. J. R. — After Bryan and Harter.) This is one of the earliest studies in which learning progress was plotted on a curve. It is a classic illustration of the learning curve.

Note the following on the foregoing chart: There is (1) rapid progress at first (due perhaps to interest in something new), followed by (2) a period of practically no progress (plateau), and then (3) another period of gain. In learning telegraphy this individual made rapid progress during the first three or four weeks, as indicated by the sudden rise in the curve. Between the sixteenth and twenty-fourth weeks he made little or no progress. Then learning progressed again.

There are a number of reasons for temporary plateaus in learning. A few of these are:

1. The student may have lost interest, which results naturally in an apparent standstill in learning. By adding incentives, renewed interest may be stimulated and the difficulty overcome.
2. It may be that some factor has entered to cause discouragement. When learning has stopped temporarily because of increased difficulty in subject matter, one should analyze the cause of the difficulty. Discouragement from this cause will never yield to any amount of "pep talk." Getting down to work will get one off this plateau.
Increased difficulty in subject matter may be caused by longer and more frequent assignments. There is only one way to resolve this problem: The student should talk it over with the instructor and together they should analyze his total study load. Either the assignments should be modified or the student's schedule should be adjusted.
3. Frequently a halt in learning is due to faulty learning habits, inefficient reading, or some physical disability. These are possibilities that must be examined, and should any one of them, or a combina-

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tion, be found to be the cause of the difficulty, correction is possible.

Progress may be halted temporarily when one tries to overcome poor learning habits. For example, if one changes his tennis stroke for a stroke that is more efficient, or changes from the hunt-and-peck system of typewriting to an approved touch-typing method, his progress will be retarded for a while.

Of significance to the student who discovers that he is on a plateau in any learning is the fact that usually this lack of progress need be only temporary. Moreover, many psychologists now believe that plateaus need not occur if learning experience is scheduled in proper rate and sequence. For example, a plateau caused by failure to understand a formula which was supposed to have been learned earlier would have been avoided if the formula had been learned at the proper time.

An impasse in learning is overcome by seeking the causes and then resolving the difficulty in the light of these insights. The student who says, "I'm stuck; I can't get anything more out of it," should analyze his problem carefully and attempt to find the true causes for his impasse. This is the scientific approach to improving one's learning.

A restatement of learning

In this brief survey of the psychology of learning we have attempted to make a case for the importance of this phase of the process to the student. Every book on psychology includes one or more chapters on this subject. The mechanisms of learning discussed here are all described fully in texts which usually are available in the college library.

The student should not expect by memorizing rules to gain an open sesame to success in learning. The purpose

of this text will be accomplished if the student gets hold of some fundamental principles, and uses them.

In enumerating these principles no particular order is more exact than others, but for review we state them in the order in which they have been discussed in this chapter:

1. Learning requires the ability to respond adequately.
2. Learning is not only an accumulative but also an integrative and organizing process.
3. Learning is a continuous, lifelong activity.
4. As we learn we change. Every bit of learning we do has its effect upon our personality.
5. Motivation is the key to learning. The various kinds of motivating conditions are usually classified in either of two categories: (1) incentives, or (2) motives. It is important to recognize the sources and relative values of motivating forces, both long- and short-range.
6. Capacity, efficiency, and effort are obviously essential to learning.
7. Exercise, association, and recency are important to learning. Recall and recognition are mental processes which depend upon the richness and recency of associations.
8. Whether emotions favor or obstruct learning depends upon the circumstances. Reward or punishment, praise or blame, "satisfyingness" or "annoyingness," encouragement or discouragement, affect learning. Overcoming the disagreeable may at times promote satisfaction.
9. The state of readiness, which involves coördination of intellect, physical ability, and emotional maturity, is a basic factor in learning.

It cannot be emphasized too strongly that learning requires effort. It is not a passive process but an active undertaking. Most students like action, but they seldom think of learning in school or college as a matter of action. It is a process of growth from the small to the large, from the weak and vague to the strong and familiar. The ability to learn can be improved. Some persons are "naturals" at learning, but most of us need to learn how to learn.

It is one thing to have knowledge about learning and quite another to put this knowledge into practice. There are principles and laws which govern learning, and one needs to know these in order to recognize the effect of learning upon man. It must be clear, however, that the process cannot be reduced to a number of mechanical steps which, if followed, will guarantee learning and retention. Learning is an individual process, even though classroom groups go through its experiences simultaneously. That is to say, the association of ideas operates differently in each individual under any circumstances of group presentation. No two persons have identical interests, purposes, or goals.

In spite of individual variations, however, a few laws of learning have general application to study in college. These are discussed in the next chapter. Through the use of efficient methods in learning, every student may increase his possibilities for success and happiness in college and in life. The immediate rewards to the student who "learns to learn" are increased accuracy, greater speed, more effectiveness with less effort, and satisfactory results with a minimum of trial and error.

Greater effectiveness in learning results in increased control over one's environment. Furthermore, as one learns to control and direct his learning, he becomes better

able to adjust and to adapt himself to the many needs and conflicts which arise in life.

The student can profit by further study of the subject. For example, learning may be viewed from the angle of habit formation. As Vaughan, in his *General Psychology*, so aptly states:

“Learning is pointed toward the novel, while habit is pointed toward the old and familiar. Habit is established as the novel becomes increasingly familiar. . . . Table manners are habits of action. Prejudices are primarily habits of thought.” (4)

With learning there is change, a truth which holds from the single-celled organism up to man. Learning is active and action means change.

SUGGESTED FURTHER READINGS ON THE SUBJECT OF LEARNING

1. BURNHAM, WILLIAM H. *The Normal Mind*. D. Appleton-Century Company, Inc., New York; 1924. Pages 62-63.
The first six chapters of this book contain one of the best discussions of the conditioned reflexes to be found anywhere. They contain many examples and provide interesting reading.
2. COMMINS, W. D. *Principles of Educational Psychology*. Ronald Press Company, New York; 1937. Page 305.
This book is written primarily for teachers. The student will find in it a well-organized statement of significant facts in regard to learning. The material is carefully indexed.
3. PRESCOTT, DANIEL A. *Emotion and the Educative Process*. American Council on Education. Washington, D. C.; 1938. Pages 162-163.
See end of Chapter 2 (page 49).

To Learn Is Both an Art and a Science

4. VAUGHAN, WAYLAND F. *General Psychology*. Doubleday, Doran & Co., Inc., New York; 1936. Page 293.

This is a well-written and pleasantly illustrated textbook for beginners in psychology. The discussions are limited, to a large extent, to human psychology.

5. YOUNG, PAUL THOMAS. *Motivation of Behavior*. John Wiley & Sons, Inc., New York; 1936. Page 45.

This book of some 550 pages reports on a number of scientific studies in the fields of animal and human motivation. Motivation is a basic factor in all fields of achievement, and careful reading of this book will help the student in making a study of himself and what makes him go.

The passages from *Motivation of Behavior*, which appear on pages 54 and 298, are reprinted by special permission of Professor Young and of the publishers, John Wiley & Sons, Inc.

Other useful books in this field are:

PITKIN, WALTER B. *The Art of Learning*. McGraw-Hill Book Company, Inc., New York; 1931.

THORNDIKE, EDWARD L. *Human Learning*. D. Appleton-Century Company, Inc., New York; 1931.

WOODWORTH, ROBERT S. *Psychology*. Henry Holt & Co., Inc., New York; 1929.

Chapter

4

STUDY IS EFFECTIVE WHEN IT IS ENJOYED

*"No profit grows where is no pleasure ta'en:
In brief, sir, study what you most affect."*

SHAKESPEARE: *The Taming of the Shrew*

THERE comes a time in the life of each of us when we discover that we do best those things which we enjoy most. So it is with learning. We learn most readily what we find most interesting. William Shakespeare, whose native insight anticipated many of the truths of modern psychology, expressed this principle in the lines quoted above.

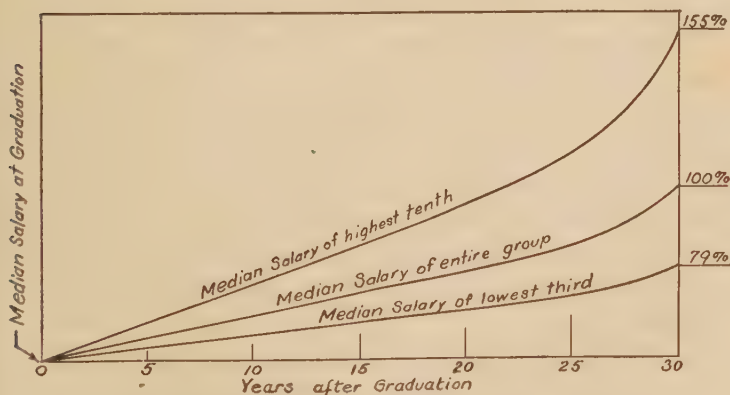
Although study requires primarily the intellectual alertness which results from interest in the subject, a pleasant emotional setting also is necessary. The feeling of pleasure does not arise spontaneously in studying a new subject. It is carried over from previous studies, from other school experiences, from outside interests, and from the home. A student who has been unhappy in school, for example, is handicapped in study because of the unpleasant associations which thoughts of school recall to his mind. Little feeling of progress or success comes to the individual who finds no pleasure in the subject he is attempting to learn.

Good scholarship augurs well for vocational success

A few years ago President Walter S. Gifford, of the American Telephone and Telegraph Company, reported a study of 3806 of the company's executives. He found that most of its successful officers had been successful students in college. They had earned above-average grades, and thirty years later they were earning above-average salaries. President Gifford declares that:

"The man in the highest tenth in scholarship at college has not one chance in ten, but nearly two chances in ten, of standing in the highest tenth in salary. The man in the lowest third in scholarship, on the other hand, has instead of one chance in ten, only one in twenty-two, of standing in the first tenth in salary." (2)

The following graph, adapted from Gifford's report, shows the average progress in this company of the good student as compared with that of the poor student.



Median salaries by college scholarship rank.

Professor Hugh Smith, of the University of Wisconsin, followed up 1800 alumni who had left the university at least fifteen years previously. His findings, too, indicate that scholarship is a good index of later success. Other studies which present similar evidence are listed in the *Readers' Guide*, which the interested student will find in the college or public library.

The telephone company survey found also that successful executives have good work habits. No doubt their native ability is the main reason for their success, but their habits of work are significant. Study is mental work. The student who has not learned how to work systematically before coming to college should consider his college years a golden opportunity to acquire this accomplishment, which is so important for success in life.

What is study?

To study a subject is to acquire information about it or to solve problems involved in it. Study means to get the material accurately into one's associative memory so that it can be used, and by the process of thinking to correlate previously learned material. Acquisition of information is the first step.

A man's business or profession may be so interesting to him that, when immersed in it, he scarcely realizes he is working. This is because he is favorably conditioned and strongly motivated to like his work. Study is the college student's business, and the way he carries it on depends, among other things, upon how much he enjoys it. Whether it is enjoyable or not depends upon his attitude.

It is encouraging to students who do not like to study, to learn that they can cultivate a favorable attitude toward it. The first step is to recognize that it is work.

Study Is Effective When It Is Enjoyed

With this wholesome approach, study becomes enjoyable. Then the student can improve in it, with practice, as in any other sort of work. Knowing how to do a thing well always adds to one's enjoyment in doing it.

Effective study is self-imposed discipline

Study is directed learning. This learning may be directed by the student or by the teacher, but usually it is the result of their coöperative efforts. Discipline also is required, and this is most effective when it is self-imposed. Good study is directed, self-disciplined, conscious learning. This is quite different from the usual idea. The average student considers study something to which he is exposed — a process done to him rather than by him.

Nevertheless, rewards and punishment play their parts in self-directed learning, just as they do if the process is directed by outside forces. One student, like most persons, frequently found it easier to postpone his assignments than to complete them on time. He determined to overcome this tendency and set out to do so in a rather amusing way. If he wanted very much to see a motion picture, he would offer it to himself as a reward for finishing a difficult report. For completing his daily assignments, he allowed himself an ice-cream soda or a milk shake. His was an effective method of self-discipline, although not everyone would find such a system necessary. Good grades and feelings of accomplishment are likewise rewards for self-directed and self-disciplined study.

Motivation in study

Until there is recognition of purposefulness in studying, it will remain below the level of its best effectiveness. When the student has an established motive for study,

his progress is assured. The following hypothetical situation illustrates effective, intensely purposeful study:

Imagine yourself at an airport. You ask a pilot for a ride in his ship. He replies that he will be glad to take you up, but on one condition, namely, that you will agree, after an hour in the air and another hour's instruction on the ground, to take the plane up by yourself. Let us suppose that you agree to his terms, and go up with him. While you are soaring around in the air, you certainly will not spend your time looking at the scenery. You will watch the instrument board, observe how the pilot handles the controls, and ask many questions about the operation of the ship. After landing, the pilot hands you a book of instructions about flying the plane and suggests that you might like to look it over. Will you then wait idly until the hour is up and it is time for you to take off for your solo flight? Indeed not! You will study as you never have before, because in this case it is for you a life-and-death matter. You will be the perfect example of motivation and self-directed study.

Twenty students in English composition may have as many motives and incentives for taking the course. Who stands the best chance for success? The one who most strongly desires to learn to write. Who stands the least chance? Anyone who takes the course merely to satisfy a requirement. Can a student in such a course motivate himself? Why not? Learning to write is only one of the possible objectives. To learn to appreciate good writing and to know more about the use of words are two other motives for study of English composition.

Curiosity kindles the impulse to study. A person who has intellectual curiosity has a strong drive to obtain knowledge. One such student commented: "It is fun to learn so many things I never knew before. Every time I

[78]

run down one bit of information it opens up ramifications in many other directions. It would take me ten years to cover all the courses on subjects I would really like to know something about." The value of intellectual curiosity as a motivating force is indicated by the statement of a college president that he would rather have students of average intelligence who possess intellectual curiosity than those who are very brilliant but blasé. College is the ideal place for the young man or young woman who has this type of motivation — every course is a welcomed challenge.

The old adage, "Where there's a will there's a way," applies to study. Motivation for it may be short-range (for immediate reward), long-range (for reward in the future), or a combination of both. It has been said, "You can lead a horse to water but you can't make him drink," but professional stockmen add, "Salt the beast and he'll drink." With motivation as the salt, the student will "drink at the fountain of knowledge."

Most college students find difficulty in making their study-efforts purposeful. For those who really desire what college offers, discipline must be self-imposed and action must be self-generated. In college, students are faced with adult problems and must solve them without expectation of much help. Motivation for study exists if incentives and motives are present or are developed.

Study implies attention and perception

The example of learning to pilot an airplane illustrates very clearly the need for attention and perception. Under the circumstances, being highly motivated, one would give attention to the subject and understanding would follow. Most psychological studies associate attention with perception. Floyd Ruch states this relationship thus:

“Attention prepares for perception. Attention is a preliminary act of adjustment which precedes perception. In fact, attention shades into perception so gradually that the two words stand for points in a continuous act of observation. The preliminary act of attending can be looked upon in two ways: (1) as an adjustment of the body and the sense organs; or (2) as clearness and vividness of a conscious experience. The thing attended to seems to stand out in the field of all experiences of which we are conscious.” (3)

What has this to do with study? Everything, for there is no study when attention is lacking. All of us can recall from childhood the teacher's frequent admonition, “Please pay attention!” We also know that while attempting to concentrate on assignments our minds often wander. When this occurs, studying stops. Only when there is active attention can study be said to be effective. Inattention and difficulty in concentration are often due to poor study habits.

When we sit down at our desk to study, we may find that it takes a little while to get into action. We pick up an unanswered letter and read it over. Then, perhaps, we begin thinking about the friend who wrote the letter. Or our thoughts may wander to Professor Smith and our irritation over a puzzling question in an examination he gave. At any rate, the mind goes away from the subject at hand on a tour of free associations. We check this and say, “I've just got to get at my work, but I certainly don't feel like it.” How easy at this point to pick up a magazine! Perhaps there is an impulse to telephone a friend or, if we live in a dormitory, to call on a neighbor.

How to get going is the question. We realize that we must direct our attention to the task before we can do

anything about it. It is obvious that the first thing to do is to place the textbook on the subject and our class notebook in front of us, and to sit in a comfortable position. This accomplished, we look over our notes or read from the text. We "warm up" on material that is familiar. Suddenly our attention is focused upon something interesting, and effectual study begins. Meaning is perceived and soon we are engrossed in what has become an enjoyable task.

How long will this span of active attention and interest last? Just so long as one can keep some material in consciousness that is well-perceived and understood. When he understands the content of what he is reading, the average college student can study continuously for at least two hours. Attention may lag occasionally during that time, but practice or habit will enable the student to persevere in his work.

With difficult subject matter, such as problems in mathematics or physics, the span of attention may be somewhat shorter. Fatigue, although often exaggerated, is a factor one must contend with. Rest periods may prove profitable if they do not lead thought activities too far into other channels. Getting up and walking around the room or going to the window for a breath of fresh air may serve to break long periods of attention. To prevent the mind from wandering to other subjects requires self-discipline, which by repetition becomes habitual.

Concentration in study

Attention implies concentration, which is a mental focusing, a centering of attention on certain parts of an experience. The length of time that one can concentrate on a subject depends upon the individual, on how interesting the subject is to him and what the distractions may

be. Concentration is greatly increased when we work under a reasonable amount of pressure, and study is most effective under such conditions. However, either extreme or excessively prolonged mental exertion may reach the point where it is injurious to physical and mental health. The habit of procrastination usually is responsible for undue pressure on the student, and if he replaces this habit with wholesome study habits, he will be able to hand in his assignments on time and without unhealthful pressure.

Memory in study

Memory, obviously, is highly essential in study. Four factors of learning are involved in what we refer to as "memory." These are (1) acquisition, (2) retention, (3) recall, and (4) recognition. Only what we have learned previously and have retained in the mind can be recalled. When this is recognized as something that has been learned before, the process of remembering is complete. At all times the mind contains a wealth of items which have been acquired and retained but which, not being needed at the moment, are not called into consciousness.

In learning new material we are assisted greatly if we find links to former learning experiences. When associations are well established, recognition occurs. Experiences which affect the emotions are easily recalled. For example, the odor of burning eucalyptus leaves may recall to a person a vivid picture of his first day at college many years before if at that time, while suffering from homesickness, he smelled the smoke of eucalyptus leaves.

Associative memory. The richer the associations during the learning process and the more recent they are, the easier it is to recall or to remember them. When one has

had a vivid and impressive learning experience, what is learned may last a lifetime. The importance of associative memory as it involves these factors is illustrated by the confession of a student named John. He related his story as follows:

"I was strictly up against it to get even a passing grade in a course in which my roommate had been making a 'B' in all his tests. Every indication pointed to the fact that I was going to 'flunk' or at best get a 'D.' I was so hard pressed that I decided to cheat. I therefore set out to plan the best 'pony' I could. With the textbook before me, I made a skeleton outline of every chapter on small cards that would fit the palm of my hand. My left coat pocket would serve as a convenient place to keep the cards until needed. I had a good night's sleep before the final examination, because I was sure I had all the help I needed. While I confess I did feel pangs of conscience, I was determined to go through with it. But as the questions lay before me, lo and behold, I could answer every one of them without the slightest need for 'riding my pony'! To my own amazement I had made a discovery — one which has lasted — and to my great relief I have never been tempted again to cheat. I found that I not only understood everything I had put down in preparing my notes, but I could visualize every important point, as well as the subheadings of the outline. As I wrote on, I felt a confidence that I never before possessed, in my complete memory of the facts required."

John found the answer to an important question: how to remember what one has studied. He made use of the important laws of learning:

1. He brought into play his emotions, for he felt the need very strongly. In other words, he was highly motivated.

2. He definitely focused his attention on the subject at hand.
3. He had to understand the material in order to outline it so accurately.
4. The material became fixed in his memory as he recited each chapter to himself.
5. His thinking became orderly in eliminating the nonessentials.
6. Going over his well-organized notes gave him a view of the whole course, and the parts he had worked out fitted into the whole.
7. He had a good night's rest. His ideas were well formulated before he went to sleep, and to sleep on ideas is good.
8. Before he went to the examination, his material was integrated and organized.

Recall is more efficient if care is taken to understand thoroughly what is to be learned. Memory can be trusted only when the material is clearly understood and vividly fixed.

Many students and even professional men have been so strongly impressed by the importance of memory that they have been ready prey for "quacks" who sell methods for the "improvement of memory." By the clever use of mnemonic (memory-assisting) devices, one of these so-called "memory courses" can assist a person to memorize specific facts, such as names or numbers. For example, salesmen or politicians may be aided in learning how to remember names of people. However, the nervous system, upon which the memories or skills depend, cannot be increased in strength as muscles can, although greater skill may be gained in specific functions. Here the memory courses are in error. They give the impression of

being able to increase the strength of the native memory, as though they did something to the nervous system. Psychologists and physiologists do not concur in this claim. But in actual accomplishment, it is possible for an individual through association of ideas to make improvement in his ability to remember, to the extent of his potential native ability.

The student may find it amusing to study one of these "memory systems," but it is not likely to be of much practical value to him.

Rote memory. Rote memory comes from uttering or observing repeatedly a phrase, sentence, stanza, or long passage in prose or poetry until we are able to recite it without error or prompting, regardless of its meaning. This is to be contrasted with logical recall, in which the meaning of the passage is used associatively to facilitate the learning process. All of us remember nursery rhymes. We probably learned them by repetition without understanding their meaning. It is doubtful, however, if we learn much in college by the rote process. Fenton summarizes the case for learning by association and logical recall rather than by rote, as follows:

"The best way to commit to memory is to read over what is to be learned, as a whole, seeing and understanding it clearly. Think of what it means, how the facts are arranged. In the case of poetry, if it is not longer than 250 lines, experimental findings suggest that you should memorize it by reading and re-reading *all of it at once*. Realize that progress with this method seems slower than learning by stanzas and is likely to be discouraging, but the *total time* taken is less. It may be hard also to overcome your prejudice against learning 'by wholes' if you are accustomed to learn 'by parts.'" (1)

To learn line by line by rote is inefficient. Repetition alone does not greatly strengthen bonds of association. Thorndike, who has done much experimental work in this field, says:

“Mere sequence with no fitness or belonging has done little or nothing. . . . With only a fourth as many repetitions the greater belongingness [meaning] results in much greater strengthening, producing nearly twice as many correct responses.” (4)

In other words, it is four times as easy to remember by getting the meaning as by memorizing the words alone.

Memory is distinct from thinking

How does memory differ from thinking? Both make use of past experience. To answer a question about something we have learned previously, we depend upon memory. However, if confronted by a new problem whose answer we have never heard, we must “think it through.” Obviously we cannot possibly keep in our memory everything that we might wish to recall. If we never forgot anything, our minds would be so cluttered up that life would not be worth living. In order to establish mental economy, we must make proper use of memory and thinking. We must keep in mind past experiences of value and enrich them by additional associations. We must also forget the unessentials. Both memory and thinking are involved in efficient study. Thinking, or forming judgments, presupposes concentration on ideas apart from emotional reactions and is a natural outgrowth of memory.

Study is a complex activity

Study involves complicated mental and physical adjustments. It is difficult to understand why we have always assumed that knowledge of how to study is inherent. Successful study demands special training, just as effective instruction is necessary for success in golf, tennis, or football.

In view of the importance of study habits in relation to vocational success, the college student needs to know the facts. A student who is failing in his college work because he lacks training in the mechanics of study is not helped by being urged to study more. Just as a captive fish must learn that it cannot get through the glass in the aquarium by batting its head against it, so must the student learn to live in the environment in which he finds himself. The one advantage he has over the fish in the tank is that he can really do something about his situation. He may bang his head a few times, but he has a potential capacity to study which, if realized, should save him many bitter experiences in his college years. And success in this most important job in college will favor success in life. The course in life of the one who fails in college is not easy. If the day of getting down to work is postponed, the desired habits of work will be that much more difficult to acquire. The student whose only purpose in college is to "get by" will later find it almost impossible to rise to a higher level of attainment. Knowledge of the laws of learning is not nearly enough. Study is anything but a passive experience. The learner must be alert and mentally active.

Techniques of study

When the time for study has come, the thing to do is to begin. One cannot wait for the proper mood to occur.

The first step toward bringing about attention is to go through the motions of studying. When there is writing to do, begin to write, even if the connection with the subject is slight at first. The act itself will arouse appropriate thinking processes. When the question, "What do you do first when getting ready to study?" is asked of students rated in the upper 10 per cent of their classes, the almost universal reply is, "I get at it at once." Some say that if their desks are littered when it is time for study they do not even stop to put them in order — they just "make a hole" and go to work. Once they are started, interested effort follows closely.

Study involves the practical application of the laws of learning. As individuals, we vary in the way we study. In spite of individual differences, the following suggestions regarding (1) the warm-up period, (2) survey of the whole, (3) breakdown for facts, (4) over-learning, and (5) review, state general principles for common practice. We must acquire our own work habits, but with due awareness of the fact that there is a right way.

(1) *The warm-up period in study.* The mind is a delicate mechanism, and to control it one needs to know something about its operations. It needs preliminary exercise before specific action can take place. Getting ready to study is much like warming up for a race. After the athletes have given their muscles a preliminary workout, the starter says: "On your marks! Get set! Go!" Note the nervous energy just as the runners get a toe hold, and before they are off. In study, the warm-up — sitting down, clearing a place to work, adjusting the light, arranging books, papers, pencils, and pen — constitutes the toe hold, ready for the command, "Go!" This is a tested and practical technique.

If too much time is allowed to elapse in the warm-up

period, fresh associations may cause the attention to change focus and the mind will go "woolgathering." The student should warm up by starting slowly and, as soon as he has the "feel" of the subject, speed up and keep hold of the controls.

When the student says, "I just can't concentrate; I can't keep my mind on the subject," this may be symptomatic of something else. It may be a physical-health situation, or the result of a mental conflict such as a disagreement with parents, or the normal disturbances of a love affair. When the necessary urge is present, the mind responds to control. It is imperative that one analyze the true situation dispassionately and face it squarely to resolve the difficulty. This requires judgment, good common sense, and the understanding of one's own emotions. It stands to reason that if one has a disagreeable letter to write or a problem to be "talked out," it is better to settle it before studying is attempted. On the other hand, if nothing can be done about the mental conflict at the time, the best thing to do is to clear the desk for action and go to work.

(2) *Survey of the whole as an aid to study.* To comprehend what is studied is vital. We can talk until doomsday about getting started, but after we start we must keep going. To do this there must be meaning to us in the thing we are doing.

The meaning of the whole is made up of the meanings of its parts. The thing we remember, however, is the whole. Parts are remembered only as units of the whole. Experienced students start by making a survey of the whole assignment to find out what it is all about. For example, if there is a chapter to read, they scan it quickly to get the author's approach to the subject and his point of view. They "peg" a part here and there.

(3) *Breakdown for facts.* In detailed study one asks the author about each point: "What do you mean?" The checkup is: "What does this mean to me? Does this statement square with everything I know about the subject?"

Study, we see, is a thing of action; now we agree and then we disagree. When attention becomes focused in this way, study is really effective. The parts build into a total concept, and we are ready for the next step. This whole will build into the next whole, and so on. These various wholes shape the content of our mental equipment.

(4) *Over-learning.* Some material is accessory and needs to be memorized only well enough for us to fix the general outline in our minds. Particularly useful material, however, should be over-learned. This is done by continuing to study somewhat beyond the time when one first can give a successful immediate repetition of the data. Over-learning is like laying up a bank account on which withdrawals can be made at later dates without danger of overdrawing. The amount of over-learning should be tested occasionally by asking oneself questions. This method anticipates possible questions that may be asked by others.

(5) *Review.* The best way to forget is to neglect to review what is learned. No matter how well we may have learned portions of a particular course, the expenditure of a little time in reviewing it occasionally will prove profitable in "fixing" the material not only for examinations, but also for longer retention so that it will be useful in integrating one subject with another.

Inhibitions to effective study

Two outstanding causes of poor recall in study are fatigue and fear.

Fatigue. To start the day right sets the standard for the whole day. A sluggish start may spell fatigue. The student who once said, "I dislike eight o'clock classes because they interfere with my evenings," had insight of a sort. He realized vaguely that it is advisable to burn the candle of life at one end only. He lacked insight, however, into the meaning and value of a college education.

Every student should realize that when he is tired he is not efficient. The effects of fatigue are serious in study as in all avenues of life. When to study and when to carry on other activities for one's personality development is a constant problem. While it is true that many things are learned outside the classroom and away from the study table, the wise student strikes a balance.

A student who "night owls" and misses his breakfast decreases his chances of success in college work. It has been found that those who miss breakfast work at low ebb until after the noon meal. There may be an occasional individual who does fairly well without breakfast, but ordinarily this practice seems to be a handicap to productive work in school and elsewhere. Sometimes the desire to go without breakfast indicates that a physical examination is advisable. In most cases, however, the student who prefers a little more sleep in the morning to breakfast needs to revise his general way of living. From the standpoint of physical hygiene, a balanced régime of rest, relaxation, exercise, sleep, and food is essential to personal efficiency.

Fear. When one's purpose in study is not entirely clear, certain choices which follow the pattern, "Shall I do this, or shall I do that?" cause confusion. An instance of this is the case of Mary, who was having difficulty with a particular chemistry assignment. Her life ambition was to become a pediatrician (child specialist in medicine).

Her instructor had said that day that chemistry seemed difficult for girls and that she in particular was not showing aptitude in this subject. That evening, while she was trying to concentrate, the remark about her lack of aptitude in chemistry became associated with the memory of the unsuccessful work she had been doing in the laboratory. Then, as Mary reported later, "I began to wonder whether the instructor was right — whether girls usually do find chemistry beyond their comprehension." This doubt set up an inhibition in her study procedure. Her conflict became intense. "Shall I or shall I not go on with my plans to become a physician?" became the issue. Each day she found it harder to study chemistry, because it seemed futile. During study hours her thoughts constantly blocked her progress in the subject.

Finally in desperation Mary called upon a professor in the psychology department whom she had heard state that sex differences are not apparent in general intelligence. Being a sympathetic and understanding person, this professor looked up her record. On the basis of the facts there, he was able to assure her that she could master chemistry if she would develop a real drive to conquer her fear of it. With this assurance and support Mary convinced her instructor that she could and would master chemistry. As most instructors will respond under such circumstances, he said, "Mary, if you will go back over the fundamental principles step by step, I'll be glad to help you." From that point on, Mary was able to prevent distraction by fear or self-distrust, and as each principle became clear, the inhibitions from which she had been suffering gradually disappeared.

These are not exceptional circumstances. Many students, in voicing doubts about their ability to succeed, betray this same lack of confidence. Often learning is

hindered by conflict of emotions rather than by lack of ability. Mary's attitude or feeling-tone toward the study of chemistry was affected by the initial failure, which was emphasized by the instructor's disapproval. In her case the motive for learning chemistry was sufficiently strong to enable her to overcome her emotional blocking. A person's emotional state during learning fluctuates considerably as the result of associations based upon recent experiences. Many students suffer from disturbing feelings in studying certain subjects. Their need is always to examine the cause of the inhibitions; for the most part they are emotional in origin.

After failing to answer a question in an examination or oral report, a student often says, "I knew the answer, but I just couldn't think of it at the time." It is a well-established fact that fear may paralyze recall. Fear takes charge of the nervous channels and blocks all intentional mental activities. Another instance of serious fear or inhibition often occurs when one is taking a test under conditions where the tester holds a stop watch and announces, "Start when I say 'go' and keep on working until I say 'stop.'"

Inhibitions during examinations usually have their basis in the fear that one may show up unfavorably in the group. Being consciously put to the test to prove that he has intelligence or information in the field may easily cause the individual to fear "losing face" — a situation that leads to many emotional disturbances.

Inhibitions may occur not only in examinations but also in the classroom during ordinary recitations, or when one is studying quietly. Thought-blocking is more likely to appear during an examination, however, because of the strain of the experience and also because of the greater psychological isolation during this time.

There are two things that can be done to avoid these inhibitions. First, over-learning is tremendously helpful. In this way a margin is built up which makes the material much easier to recall. The subsequent self-confidence reduces the likelihood of fear, but even if some of the material is lost because of fear, a large enough amount still remains so that relative success can be achieved. Second, it is helpful to build up as many associations as possible. These greatly facilitate later recall even in the face of inhibitions.

Study is a business

Studying is the major activity in college. The student who is to succeed does much studying every day. How to study, therefore, is important. Good habits of study acquired in college are foundations for good habits of work in later life and may be a measure of one's later success.

Just as learning continues to the end of life, so does study. When college days are over, real education is beginning. Customs are changing rapidly; there have been extraordinary changes in the last two or three decades. Present-day students, whether in school or in the business or professional world; must study constantly to keep abreast of the times and to meet changing situations successfully.

Until comparatively recently, many sons learned their occupations from their fathers by becoming apprentices or by going into the family firm. To a certain extent they lived with or grew up with the work they were to do. Only rarely now does the son of a wholesale merchant start in the warehouse and work his way up. Today he must learn by less direct means how to support himself and how to make his contribution to life. Both labor-

union rules and present-day demands for broader education and knowledge make older methods of learning impractical. The idea that an elementary or at most a high school education is adequate preparation for business has been supplanted by the conviction that young people today must have more and more background of knowledge. For all levels of citizens the need is to learn how to study and work efficiently.

In college the student receives information from the faculty, from assigned reading, and from experiences in the laboratories. He gains skills and ideas, many of the latter theoretical and intangible concepts, which may be useful to him in later life. Symbolically, we may think of the student as buying this equipment by writing good papers and meeting other requirements satisfactorily.

The meaning of efficiency in work

Industry has made almost a fetish of efficiency. The value of efficient habits of work has been shown in many instances. In the 1880's Frederick Taylor, of the Bethlehem Steel Corporation, showed that study of workers' habitual motions made it possible, even in such a simple operation as loading pig iron, to increase the amount accomplished in a given time by as much as two to four hundred per cent. And with the new methods the workers were actually less tired, although they achieved two to four times more work. Enormous increases in the number of bricks laid per day per man were brought about by introducing into bricklaying more efficient methods of work and properly spaced rest periods. Managers of large offices employing many clerical workers find that allowing employees a rest period increases their efficiency. In many instances business houses, by increasing their production, have captured important markets. Business

has found that improved efficiency pays well in dollars and cents.

The student should observe the work habits of the successful businessman. Letters are answered the same day they come to his desk. His files are organized so that pertinent information can be produced at once. If he agrees to do something, he attends to it promptly. Such conduct has become a tradition in American business and is known as being "businesslike." Students for the most part have no tradition of being businesslike.

The less efficient student usually is behind in his assignments. His notebook is incomplete and shows lack of system. As a rule his notes or readings are disorganized. On the date when a report is due he has to scramble to get the material in. The moment it is safely in the hands of his instructor, the student breathes a sigh of relief and goes on blissfully attending to matters of greater importance to himself until another assignment is due, when the sad confusion is repeated.

Rules for efficient study

Good study habits can be learned, and once learned they pay good dividends. For instance, W. F. Book reports that 87 per cent of the college freshmen who enrolled in a "how to study" course completed college work satisfactorily and graduated, while only about one half of another group who did not take the course had similar success.

Study is essentially the application of the art and science of learning. Following are thirty-two rules for efficient study:

1. Keep in training by guarding all phases of physical and mental health. Rest, recreation, nourishment, air, and light are important needs.

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2. Select each course on the basis of your capacity and previous training. The wrong selection of a course may cause discouragement and feelings of inadequacy the effects of which may extend far beyond the particular course.
3. Cultivate a favorable attitude toward study.
4. Establish a definite time and place for study. (See Chapter 6.)
5. Get going when it is time for study. Good students study when the time comes to do so and leave the mood to adjust itself.
6. Plan your motions. Place all materials to be used within your reach. Rearrange equipment for the next task when the first one is finished.
7. Work when you work. One hour of concentrated study is worth three hours of half-hearted effort.
8. First, examine or explore the whole assignment. Then associate everything you can and bring together all the parts into a whole.
9. Know what you want to read. Locate books and periodicals; check contents by using indexes before taking time to read details.
10. Keep up to date on publications which contain pertinent subject matter. Use periodical indexes and book lists.
11. When much reading is required, read awhile, think awhile, and then read some more. Write your own thoughts in your own books.
12. Raise questions in your own mind as you read. Form judgments and test them against the ideas of the author or the lecturer, as the case may be.
13. Be thorough. Analyze different points of view and inform yourself thoroughly in the field you are studying.

14. Do not skip graphs and tables. Learn to interpret this illustrative material.
15. Use the dictionary and look up words you do not understand. Words are important. One can miss the entire meaning of the author by failing to understand the connotation of terms he uses.
16. Copy verbatim material sparingly. Quotations should be copied only when they are needed to make a point. You may need to reproduce essential graphs and charts.
17. Keep notes. Set them down in your own words. Make them clear and concise. Think as you put them down.
18. Arrange your notebooks systematically. Each subject should have a separate section, if not a separate notebook. There are great differences between students in this respect; a good student can open his notebook at once to the material he wants.
19. Try to follow an outline and to avoid rambling notes.
20. Be discriminative in note-taking. Everything one reads or hears about does not deserve to be written down.
21. Revise your notes. Re-read them and fill in more of your own thoughts. Good students spend time on their notes. Reorganizing and revising notes increases associations and is time profitably spent.
22. In writing a paper, get your facts marshaled before you write. First lay out a plan or outline. Outlining or blocking out before writing provides an opportunity for thought processes.
23. In reports and papers use creative skill in introducing your subject, and draw your conclusions carefully.

24. Choose your words with care and cultivate clear, concise forms of expression. The person who reads your paper is human and is subject to fatigue. Accurate choice of words clarifies your thought processes and makes your meaning clear to him.
25. Be neat. Careful typewriting, double-spaced with meaningful indentions, has a good psychological effect. Handwriting should be neat and legible. Quotations, graphs, pictures, and maps add strength and character to what might otherwise be a dull presentation. A carefully prepared paper deserves an attractive binder.
26. Set a dead line for getting assignments done. Then work to complete them ahead of schedule. Always be on time with assignments.
27. Review occasionally. The best way to forget is to avoid review. No matter how well you may have learned portions of a particular course, the expenditure of a little time in occasional review will prove a profitable exercise, paying dividends at the time of final examination.
28. Ask yourself questions when reviewing. This is rarely done by weaker students.
29. While reviewing, examine most thoroughly that which is not quite clear or which has no meaning to you.
30. Before examination, review all material at least once, then check the unfamiliar parts more intensively.
31. When taking an examination, read all the questions before writing, and plan your time. This applies also in study.
32. Always check your answers. Read over the complete report or examination before handing it in.

Effective study in review

Of basic importance in study is the attitude toward it. To be effective, it must be emotionally satisfying. One's attitude toward study may be favorably conditioned by realization of the correlation between academic success and business success.

Study may be described as a system of habits of mental work. It involves the giving of protracted attention to the subject at hand. The mental and physical adjustment to study is a complex activity. It is a discipline which functions best when self-imposed. This discipline constitutes the training of oneself by means of the understanding of general principles and the use of specific rules and exercises. It is an active process as contrasted with a passive experience, such as enjoyment of motion pictures.

Study must be intensely purposeful. When there is a real desire to study we say motivation is present, and it is motivation that makes the wheels go around.

Attention and perception are essential to effective study. Concentration, or strongly focused attention, is necessary; so also are rest and relaxation. When we understand something about the topic at hand, learning has occurred.

Memory is for the most part a matter of forming associations. The more recent and richer the associations, the easier is recall. Mere repetition without attendant insight into meaning is largely a waste of time. *Acquiring* information, then *retaining* it so that it can be *recalled* and *recognized* when it is needed, are four steps in learning which, applied, make for efficient study.

One cannot postpone study until the mood is right. To be effective, one must be able to get "up and at it"

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when the time comes. The willing mind can develop a favorable attitude toward study at the appointed time.

There is a period of warming up for study just as there is in athletic activities. First, a survey of the whole unit to be covered is desirable; then, the parts that make up the whole fit in naturally as the associations are enriched and strengthened and as perspective is gained.

A most troublesome factor in study is inhibition. Distractions from the subject at hand often result from fatigue and from fear.

Study is the student's business. Industry has pointed the way to students in the matter of efficiency by eliminating waste motion and by providing for adequate rest periods. Study is more than a classroom activity; it is life in action.

SUGGESTED FURTHER READINGS ON THE SUBJECT OF STUDY

1. FENTON, NORMAN. *Self-Direction and Adjustment*. World Book Company, Yonkers-on-Hudson, New York; 1926. Page 40.

The emphasis in this short and readable book of 121 pages is on self-adjustment to student life. It contains many helpful suggestions on effective learning and study.

2. GIFFORD, WALTER S. "Does Business Want Scholars?" *Harper's Magazine* (May, 1928).

This is a reliable study which contains many valuable suggestions. The student will find here excellent predictive material on the importance of study while in college.

3. RUCH, FLOYD L. *Psychology and Life*. Scott, Foresman & Co., Chicago; 1937. Page 443.

This is a book of general psychology. It contains much illustrative material and is exceptionally readable. The author states that he wrote it "under a vow of loyalty to

the student as a certain member and possible leader of society." The book is divided into four parts: (1) Psychology and People, (2) The Background of Behavior, (3) Psychological Problems, and (4) Observing, Learning, and Thinking.

4. THORNDIKE, EDWARD L. *Human Learning*. D. Appleton-Century Company, Inc., New York; 1931. Pages 19, 23. This book consists of twelve lectures given at Cornell University in 1928-1929. It is one of the author's most readable books. In the first lecture he says, "Man's power to change himself — that is, to learn — is perhaps the most impressive thing about him." This book is replete with examples of good study habits and efficient methods of learning.

Other useful books in this field are:

- BARNES, RALPH M. *Motion and Time Study*. John Wiley & Sons, Inc., New York; 1937.
- BENNETT, M. E. *College and Life*. (Revised.) McGraw-Hill Book Company, Inc., New York; 1941.
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Chapter

5

QUANTITY AND QUALITY IN READING

"Some books are to be tasted, others to be swallowed, and some few are to be chewed and digested." FRANCIS BACON

Books to be swallowed are those we read for sheer enjoyment. Francis Bacon probably had this in mind when he wrote the lines above. Ben Redman, in *Reading at Random*, relates the following story:

"'What are you reading, my dear? Not a detective story!' The delinquent hung her head. 'Yes, it is,' she murmured. Then looking bravely up, she added, 'But, you see, I am not reading to retain.'"

Now, why should we not read for fun? The concept that reading must always produce information intended for retention comes from its being associated with study. Many people read for pleasure and relaxation. To stretch out or curl up comfortably with a good book is for them as enjoyable as a play or a motion picture. These persons usually are able to read understandingly not less than three hundred words a minute. The individual who says, "There is nothing I enjoy more than a good story," commonly has the ability to read rapidly.

Rapid readers like to read because for them stories unfold swiftly enough to avoid boredom. This is as true in study as it is in reading for pleasure. Slow readers are easily bothered by associations foreign to the subject matter which creep in and divert their attention. Some individuals read so slowly and concentrate so much attention upon each word that by the time they have finished a sentence they have forgotten what the beginning of the sentence was about. Hence, they get little or no understanding from their perusal.

“Rate of reading” does not refer to the speed with which a person may move his eyes along the lines of print without understanding the meaning. Such mere eye movements are not reading. Rate of reading means the rapidity and ease with which one comprehends a given page, article, or book.

Reading is a skill that can be increased by training. Since a large part of a student’s time is spent in this activity, he should do everything possible to improve his ability in this direction.

Importance of reading

Most freshmen enter college with mingled feelings of anticipation and dread. Although they look forward to pleasant times, they know also that college will make new and greater demands upon them. Sometimes these demands are greatly exaggerated by older students in order to impress the beginner with the difficulties of college life. Nevertheless, the freshman soon finds that he is called upon to work harder, faster, and more carefully than ever before. His load is increased in both quantity and quality over that of high school.

The increase in the quantity of reading the student must do characterizes the transition from high school to

college. And not only is the college student called upon to do more reading, but the assignments become more intensive and more difficult. Lecture rooms and laboratories provide much in the way of learning experiences, but the library becomes the center of the student's academic world. Most college teachers constantly refer their students to the library.

Besides its scholastic importance to the college student, reading has deep social significance in a world of great social change, of disturbed economic institutions, of physical and psychological strain. As in times past, the well-read man is best able to understand and to anticipate change, to find security and a way of life and action, and to contribute intelligently to his social order. As a means to academic success or, in its broader aspects, as a means of acquiring understanding of life and society, the ability to read well is of vital importance to the college student.

Variations in reading ability

It is reasonable to assume that, having been taught reading in elementary school, college students can read; otherwise they would not be in college. Nevertheless, they do not all read with the same ability. This fact becomes alarming when we examine the evidence of tests carried on during the past few years in many colleges throughout the country, and discover that reading ability of college students frequently is no greater than that of children in the fourth or fifth grade. It is of course impossible for any college student to do satisfactory work with no more reading ability than that of a fifth grader.

A silent reading test for one group of eighty college freshmen showed a spread of ability ranging from fifth grade to superior college achievement. Seventy students of another freshman class were requested to read simul-

taneously from a book of which each had a copy. They were asked to start reading a chapter on the subject of reading and to make as much progress as they could at their usual rate. They were not told that there was to be a time limit. At the end of five minutes, however, each student was asked to mark the word he had last read. The scores in words per minute ranged from one hundred to nine hundred!

There apparently are equally great variations in other reading factors which might be considered. A recent informal study of the voluntary reading of thirty-five college students over a period of four months revealed that two students at the low extreme did no voluntary reading at all, while in the same period one student at the other extreme read twenty-five books of his own choice in addition to assigned reading and numerous newspaper and magazine articles. Statements from students themselves indicate attitudes toward reading ranging from intense dislike to extreme satisfaction and pleasure.

Consider the plight of the college freshman whose reading ability is at the eighth or ninth grade level. His entrance into college presupposes his being able to do college work. He will have to compete with students who can read material of collegiate difficulty with ease and accuracy. The well-equipped student will be able to assume in stride the gradually increasing burden of reading. What will happen to the retarded reader? The answer is obvious. Toll is certain to be taken of him in the form of great physical and emotional strain. He probably will fail, and will be obliged to leave college. Some students are seriously tempted to cheat in order to compensate for their deficiencies in reading ability.

The student who cannot read is by no means a rare exception. Some of the estimates that have been made

of the percentage of college students who cannot read up to grade run as high as 30 per cent.

Criteria of reading ability

Since the reading demands made on different individuals vary greatly, we cannot set definite standards of proficiency for everyone. However, it is possible to set forth certain characteristics which are typical of the well-equipped reader.

In the first place, it is important that the student should have had experience with various kinds of reading materials, both books and periodicals. Many students reach college with almost no reading experience of any kind. Such students read in high school only the pages assigned them by their teachers. Many never have had interest or initiative enough to read a complete book. A student recently admitted that until he learned to read efficiently he had never read a book from cover to cover. He added, "I never really knew the pleasure I was missing." On the basis of reading experiences we build standards of choice and interest which enable us to make dependable, critical judgments of what we read. College freshmen should have some standards already formed concerning the books and materials they like to read and find worth while.

The able student's chief characteristic is his positive attitude toward reading. He takes an active interest in it. Reading holds an important place in his life, not only as a means of solving practical problems, of gaining information, and of developing understanding, but also as a constant source of pleasure and enjoyment. And he reads, not because it is required but because he likes to read. He reads many other things besides school assignments.

The good reader can follow with ease the trend of the author's discourse and think along with the writer. In narrative material he can follow the trend of the story, visualize the scenes described, recognize and identify the characters portrayed, and enjoy, suffer, or profit from the human experiences narrated. In non-narrative reading he is able to identify facts and concepts, follow the author's steps in reasoning, and, depending upon his purpose, take from the reading either general ideas or specific details.

The good reader is constantly on the alert to interpret the ideas he finds expressed, to evaluate them critically, and to see their implications and consequences. Above all, he does not believe everything he reads; he demands evidence in support of views advanced by the author and is skeptical of unsupported conclusions. He is on the alert constantly for emotionally toned words and for shifts in meaning. He is not led astray by writers who wish to pervert his beliefs for selfish or dishonest reasons. In short, the good reader is a clear thinker.

A majority of college students learn to increase the facility with which they use reading materials. This facility implies ability to find books and magazines needed, and skill in getting information from them easily and quickly. Actually, it means being able to use the library in an effective manner. The student who did not learn to do this in high school needs to acquire the ability in college. The librarian can furnish him with good references such as Frederick and Burton's *How to Study Handbook*, (1) which gives library information in detail.

Some individuals have only one rate of reading. Whether the subject matter is easy or difficult, important or irrelevant, they plod conscientiously through every word and phrase as though all ideas encountered were of equal value. This single rate may be high enough or,

as is usually the case with single-rated readers, it may be exceedingly low. The serious error is not so much the rate as the fact that it is never varied.

The efficient reader adjusts his reading rate to his purposes. The good student can read average material, such as *The Reader's Digest*, at a rate between 300 and 400 words a minute. His range of rate, however, may extend from 150 to 600 words a minute. Like an automobile, he can use high, intermediate, or low gear, depending upon the need at the time. When he reads easy, non-technical material in order to pick up the main ideas expressed, he probably reads very rapidly and with an eye to selecting only the significant sections for study. However, when he is perusing material of a difficult nature for mastery or for careful, critical judgment, he reads more slowly and more deliberately. The able student makes constant adjustment in reading-pattern to many purposes and types of material.

No matter what his past experiences have been, the student-reader of this chapter must face the question, "How well can *I* read?" If the answer is, "Not well enough," he should begin at once to do something about it.

Students can evaluate their own reading ability

Let us assume that the student is consciously trying to apply good standards to his own reading experiences and abilities. In order to evaluate his own reading it is suggested that he answer for himself the questions listed below.

(1) *Do I read?* We like to do the things we do well. Hence, it usually follows that if we are good readers and have developed an interest in reading, we do much of it. Many students find time every day for some reading; others concentrate their reading in cyclic periods.

(2) *Do I enjoy reading?* If we do not enjoy reading, or if we actually dislike it, we may reasonably question our ability in it.

Oftentimes students who dislike reading can account for their present attitude in terms of some unpleasant or unfavorable experience with it in the past. It is not unusual for students to be adversely conditioned because they were scolded and humiliated about their reading when they were younger. In such a case, the dislike frequently can be overcome if the reason for it can be discovered.

(3) *Do I have difficulty in comprehending?* This is a hard question for the student to answer for himself. Occasionally there are students who recognize clearly the fact that they are missing out by failure to comprehend the meanings of words or to follow the trend of thought. More often, though, readers assume that they have understood what they read.

A discussion with a fellow student of some material which both have read may serve to reveal "blind spots" in understanding. Similarly, a class discussion of material read by the entire group usually is a good basis for comparing one's own comprehension with that of others. Or the student may ask another person to question him on something he has read and, from his success in answering the questions, he may determine roughly the degree of his comprehension. One such experiment will scarcely be indicative, but several checks of this kind covering materials of varied nature will give the student a fairly accurate notion of his proficiency in reading.

(4) *Do I have difficulty in reading rapidly?* It is easy for a student to determine exactly the rate at which he reads. If he times himself while reading a magazine article or a few pages in a book, counts the number of

words read, and divides that number by the number of minutes required, he discovers his reading rate in words per minute. A book entitled *Let's Read*, (3) by Roberts, Rand, and Tardy, contains material definitely planned for this purpose.

Most slow readers are painfully conscious of this deficiency. It is relatively easy for a student to observe that it takes him two or three times as long to read a chapter as it does many of his fellow students. If his rate is characteristically below 225 or 250 words a minute for easy, narrative material, he may well feel genuine concern, even though his attitude toward reading is favorable and his comprehension good.

By applying the preceding questions, the student may check up informally and yet with some objectivity on his reading ability. A fair estimate of his attitudes, habits, and performance may disclose that he has real difficulty in understanding what he reads and that he requires an undue amount of time, failing characteristically to finish his assignments in the time set aside for them.

Certain objective measures of reading ability

Before the student bases conclusions upon his own subjective estimate of his reading ability, it is advisable to supplement this with objective scores obtained from standardized measurements. Within recent years reading tests of different types and emphases have been worked out to determine in a scientific manner the reading ability of students on all scholastic levels. For college students, the *Nelson-Denny Reading Test*, the *Minnesota Speed of Reading Test*, and the *Iowa Silent Reading Tests — Advanced* give helpful indications. The student's score on such a test is a fairly accurate measure of his speed and comprehension in reading.

There is another type of measurement of reading ability which is interesting, although it is not yet in general use. It has long been known that there is a positive relationship between good reading and regular, coördinated movements of the eyes. Students commonly suppose that the eyes sweep regularly and smoothly along each line on a printed page. Actually, the eyes, in reading, move by a series of jumps from left to right along a line of print, then make a long sweep back to the beginning of the next line, which is then read by another series of jumps. These jumps are made very rapidly, each taking only two to three hundredths (0.02-0.03) of a second. Between jumps the eyes are absolutely at rest. It is during these pauses that the material is read. Each pause is known as a "fixation." The amount of print recognized in a single fixation is known as the "span of recognition." The pause is much longer in duration than the jump, so that during over 90 per cent of reading time the eyes are at rest, less than 10 per cent of the time being occupied in eye movements. While the eyes are in motion during a jump, they are blind to the material over which they pass.

The way the eyes jump or jerk can be readily seen by a simple experiment. Take a typewritten sheet or a page of print and poke a hole in it the size of a pencil point. Then put the reverse side of the page close to your eye so that you can see through the hole, and have someone read the page while you observe one of his eyes. This easy experiment demonstrates clearly the actual movements of the eye as it moves and halts along the line.

By means of an eye-movement camera it is possible to record the movements of the eyes in reading. Fixations are shown as short vertical jogs on the film. The average college reader approximates 80 of these

fixations in reading 100 words of simple material. Regressive fixations are recorded when the reader looks back at a word or phrase he has already moved his eyes beyond. The average college student shows about 10 regressions in reading 100 words. Poor reading is characterized by excessive numbers of both fixations and regressions.

Since the film turns in the eye-movement camera at a constant rate, the instrument gives also an objective measure of rate of reading. Comprehension is checked by means of questions relating to the material read. Taylor reports norms "based on the reading-graphs of over two thousand students trained by traditional methods." (5) He found that the average college student reads 325 words a minute of easy material before training and 425 words a minute after training. We can conclude, then, that college students should be able to read and comprehend ordinary reading matter at a rate between 300 and 400 words a minute.

Causes of reading difficulty

By careful, subjective evaluation of his reading attitudes, habits, and skills, supplemented by objective tests, the student can determine with relative accuracy the quality and characteristics of his reading ability. In order to do so, he should employ every known method of checking and measuring; he should not rely on any single test.

The results of such an evaluation are often very disheartening. The student may find that he is retarded four or five years in reading development, and that this limits his prospects for success in college. To overcome this disadvantage, it is worth while for the student to examine his habits of reading and to try to correct his

weaknesses. Does he move his lips in reading, unconsciously pronouncing each word to himself? If he does, he will want to take steps to establish a new set of reading habits.

The process of developing one's reading ability involves two important steps: finding and removing the causes of the retardation, and planning and carrying out a program of remedial practice.

The causes of a reading disability may be either superficial or deep-seated. In some cases they can be removed by the student himself, easily and relatively quickly. In other cases systematic programs of correction over long-term periods are required. The best advice that can be offered to the college freshman who suffers from a reading handicap is to consult a specially trained teacher of reading, if there is one in his school, and to place the problem in his skilled hands.

Although numerous colleges throughout the country are making provisions in their programs for special help in reading, many have not yet made it possible for students to get the aid they need. Consequently, some discussion here of the possible causes of reading failure may help the student to understand the nature of his own problems and may give him a key to the correction of his difficulties. When we cannot reach a doctor, we must doctor ourselves.

(1) *Physical causes.* Some students have difficulty in reading because of acute health problems. Good reading is favored by the full energy and vitality of a healthy body. If a student is suffering from a chronic physical ailment, a glandular disturbance, the results of faulty diet, fatigue occasioned by insufficient rest, or any of a number of other physical maladjustments, a reading handicap is likely to develop as another symptom of his condition.

Very closely related to general physical health is vision. The condition of the eyes may be impaired from various causes. Occasionally difficulties in vision show themselves immediately in painful eyestrain and headaches. In other instances the lowering of visual efficiency is so gradual that the person concerned is not conscious of the defect. He may assume that his vision is satisfactory when actually he is under constant strain of extreme accommodation and adjustment — a condition which must certainly affect his reading efficiency. Every student who is handicapped in reading should have his eyes examined by a competent eye specialist.

(2) *Mental factors.* Psychological findings indicate that there is a positive correlation between intelligence and reading ability. Nevertheless, it is generally agreed that reading is a skill in which one can improve oneself. Many students who score relatively low on mental tests have been able to learn to read quite well. On the other hand, many who measure high in mental examinations are poor readers. Difficulties in reading due to mental factors can be overcome to a considerable extent by persistent effort.

(3) *Emotional factors.* A student suffering from an emotional disturbance of long standing finds himself ineffective in almost everything he attempts. Home conflicts are an example. One student said, "Whenever I couldn't sit quietly and read like my sister did, my mother pounced all over me." Shaming of pupils by teachers because of poor reading is another source of unfavorable early conditioning. Such disturbances certainly tend to reduce the student's chances of learning to read effectively. Likewise, a long history of failure in reading for any reason may cause a feeling of inadequacy that will block the development of good reading habits. In other

cases a single unpleasant incident of sufficient intensity may affect permanently a person's reading attitudes. Such inhibitions, if recognized, can be overcome.

(4) *Environmental factors and experiences.* Good readers frequently say, "I have read a lot ever since I can remember." Or they may say, "I have always enjoyed reading. My parents were fond of it and I guess I just picked it up from them." On the other hand, poor readers say, "I have never liked to read." Or, "There were very few good books or magazines in my home and I just never found anything I wanted to read." Or, "I was forced to read a certain book when I was eleven. I didn't like it and couldn't understand it. Ever since that time I have had a distaste for reading." If the environment of the individual has lacked interesting reading materials, he may find it difficult to develop the enthusiasm for reading which good readers possess.

(5) *Poor training.* Some students fail to develop their full capacity in reading because of faulty training during the early years. Speed and comprehension seem to depend more than a little upon habits of eye movements in reading. In poor reading the eyes are halting, irregular, and regressive. Here is where practice counts.

Vocalizing is another result of faulty training. The processes of oral and silent reading seem to be somewhat distinct from one another. Oral reading involves the additional step of translating symbols into sounds. The most rapid reader finds it difficult to read aloud more than 250 words a minute. If a reader vocalizes — silently pronounces the words with his lips or in his throat — he falls back to almost the same speed as if he were reading orally. Studies of superior reading indicate that the better silent readers do not read word by word, but in some instances read four or five words at a time. The

advantage of this method is obvious. Not only does it increase the rate of reading, but it permits the reader to grasp meanings by wholes rather than by piecing together single words.

It is sometimes very helpful for a student who lacks interest in reading, or who reads poorly, to search through his previous experiences for possible causes of his difficulty. Discovery of the cause will often suggest the appropriate remedy.

Students can improve their reading ability

College students can improve their reading ability. This assurance may be needed by those who have examined themselves and found that they are wanting in this respect. The student who is willing to try hard enough will find that he can develop his reading ability to a point where it ceases to be a handicap or becomes even his greatest strength. Good readers as well as poor can profit from efforts to improve their reading ability.

With the less acute problems and where the student can determine with confidence the reasons for his failure to develop normal reading interests, habits, and skills, it is possible, within limits, for him to work out his own program of correction. But he should not expect the impossible, for twelve years of poor reading habits cannot be changed overnight. It may take as long as two or three years of systematic effort to complete the desired development. Self-correction of faulty reading habits is difficult and calls for courage and patience, but the student who goes about it seriously can, in a majority of cases, improve his reading ability enormously.

(1) *Find easy, highly interesting material to read.* First and most important in a program of development is the

building of an interest. Practice in reading is imperative, and if a student is to enter eagerly into such practice he must be interested in what he reads. The subject matter may lie in the fields of radio, sports, mechanics, or any other study which he finds interesting. Books, magazines, or other materials that bear on these subjects constitute pleasurable reading for him.

One caution should be exercised in choosing books or articles. They should be easy to read and yet mature enough to be interesting. The student who finds that he is a slow reader, even though his interests may be very mature, should seek to discover the sort of thing that he can read with ease and enjoyment.

(2) *Practice daily.* As the student obtains books and magazines that he can read with real enjoyment, it is important that he plan to read as much as he can every day and that he obtain progressively more mature material, as his comprehension will improve with his increasing rate of reading. The pressure of studies and other activities makes it difficult to practice every day; yet if the student schedules definitely a certain time of the day for this purpose, preferably in the morning when he is rested and alert, it will soon be easy for him to maintain a regular habit of daily reading. The period devoted to this activity should be long enough to provide sufficient practice and yet not so long that fatigue reduces the enjoyment. The student himself can judge best the length of time he should practice every day, and he can gradually increase the period as he develops greater reading endurance.

(3) *Read against time.* As the student develops the habit of regular daily reading, he becomes increasingly adept in it. By forcing himself slightly each time he reads, he will soon perceive that his speed is increasing.

In order to check definitely on this improvement, he should time part of his daily reading in words per minute. Then by charting his daily scores he can see his progressive increase in rate. It is good practice to attempt each day to read a little more rapidly than the day before. However, the student should not attempt to press himself too fast, but read always to understand. Constant emphasis should be placed upon more rapid comprehension of what is read.

As the silent reading speed increases, vocalizing decreases. This dependence upon the sound of words is a habit, usually of long standing. When his speed surpasses 250 words a minute, the reader no longer depends upon the sound of the words because he does not have time to pronounce them. Constant effort to maintain and to increase his reading rate will reward the student with a general substitution of direct silent reading. However, great patience is required. The elimination of the vocal reading habit is one of the most difficult of all steps in a program of improvement.

As the rate of the student's reading increases under self-pressure, he notes another interesting type of improvement. Just as he no longer has time to sound each word, so he no longer has time to give individual attention to each word. He notices that he begins to see more words at one time — now two, now three or four. Phrase reading, rather than word reading, begins to characterize his reading pattern. He finds, too, that his eye movements grow increasingly steadier and more regular. The effort to press on reduces the number of regressive movements.

(4) *Learn word meanings and sentence structure.* Experiences with ideas or objects presented, whether through previous reading about them, seeing them, hearing about

them, or by actual contact with them, all constitute background for understanding what is read. Individuals tend to read most in the fields in which they understand the words used. The constant sports reader knows and enjoys the vocabulary of the sports writer. The fellow who reads much about aeronautics knows aeronautical terms. To other readers, both may be almost unintelligible.

A serious criticism of earlier English teaching methods is that they did not afford enough practice material of vital interest to students and that they therefore failed to develop vocabulary mastery. Ruth Strang, who has written a book on the subject of reading, places much importance on vocabulary. She writes:

“Vocabulary study is like the warp threads running through the entire developmental reading program. The little child’s first understanding of words and the adult’s most intricate reasoning processes are woven upon it. It is a prerequisite to, as well as a result of, effective reading. Vocabulary is so basic because it represents not merely a list of words but the key to the important concepts in all subjects.” (4)

There are many ways by which a person can increase his vocabulary which we will not discuss here. Suffice it to say that when we find a word that better expresses the meaning we wish to convey, we should use it whenever the opportunity presents itself. An accepted plan to make a word our own is to use it correctly at least three times.

It is apparent that to improve our reading facility we must increase our understanding of the English language. In addition to a comprehensive vocabulary, we need a knowledge of sentence structure in order to grasp true meanings. Students often miss the finer points of the

author's meaning because they do not know the fundamentals of good sentence structure.

Obviously, the student himself is not the best judge of how well he understands what he reads. He should test his comprehension in various ways. He can, of course, have other students or teachers ask him questions about the materials he reads. But a less formal and perhaps more satisfactory way is to discuss freely the books and articles he has read with other people who have read them. Then by comparing his reading results with those of others he can begin to see elements of meaning which he misses and can focus more careful attention on these factors. If his understanding of a book is at variance with that of his friends, he will want to inquire into the basis for this difference. By doing this repeatedly he profits by the reading experiences of other persons and at the same time he builds up his own method and manner of understanding what he reads.

Another caution: These changes will not take place quickly nor will improvement be steady and regular. If the reader attempts, in his eagerness, to push himself too hard, he may actually find negative factors entering. Comprehension may be lessened or he may experience emotional disturbances. It is recommended that he apply himself to the task with energy, but likewise with perspective, being content with reasonable gains in speed and comprehension.

Read critically to avoid adolescent reasoning

Many readers believe unquestioningly everything they read. They back up any statements they may make with the assertion that they have read it in such and such a place. Of course, it is true that we get a great deal of

accurate information in this way, but we must learn to be critical of what we read. Expression of an idea or an alleged fact in print does not necessarily give it authenticity.

In this day when so many confusing opinions are found in everything we read — newspapers, magazines, and books — and when so much depends upon our selecting carefully among these opinions, we must exercise critical judgment in reading, accepting as authentic only those opinions and conclusions which are backed up by facts.

While it is true that an author always has a purpose in writing, it is likewise true that his purpose may not be an obvious one or even an honest one. He may present certain apparently acceptable points and ideas in such a way as to confuse, distort, or conceal the real issue. He may very cleverly lead the reader into mental traps, into prejudiced points of view, into illogical reasoning sequences, for the purpose of winning the reader to his side of an argument.

Hence, if he is to protect himself from these current practices on the part of writers with vested interests and selfish purposes, the reader must view skeptically and coolly the ideas he encounters. He must think clearly as he reads.

Summary of the case for adjustment in reading

If we all lived in James Hilton's Shangri-La, we might "have time to read — never again have to skim pages to save minutes, or avoid some study lest it prove too engrossing." (2) But we live in a very real world in which time is one of the most compelling factors. We are forced, whether we like it or not, constantly to read against time. What, then, does efficiency in reading imply?

Throughout the development of our reading we need to keep constantly in mind one important principle which applies to all the reading we do. Each type of material is read for a different purpose and should be read in a different manner. Thus we should constantly adjust our reading method to the particular material and the specific purpose involved.

Reading may be extensive or it may be intensive, depending upon the purpose. A story may be considered extensive reading. Here we read with maximum speed to get the story, and perhaps the author's style. A problem in mathematics, on the other hand, classifies surely as intensive reading; we must read it carefully if we expect to solve it. In extensive reading we work at high speed; the more intensive the reading, the slower the speed.

A good reader reads aloud about 250 words a minute as a maximum. Efficient silent readers should read from 300 to 400 words a minute with good comprehension. Vocalization — pronouncing in the throat and moving the lips — must disappear before a person can become a competent reader.

The library constitutes the reading center for the good student who knows how to use it.

Meaning is everything to the effective reader. He thinks along with the author and understands from previous experience what he is reading about. The good reader enjoys his reading. He cultivates a favorable attitude toward it, and overcomes emotional disturbances which tend to inhibit it.

The student should know his own reading ability. He can time himself and test his comprehension both subjectively and objectively. There are mechanical methods for checking reading ability which are used in consultation work by expert reading teachers.

The eye does not do the seeing; it is the mind that does this. However, photographs of eye movements show whether or not the eyes are functioning efficiently in transmitting word-images to the mind. The pause between eye movements is called a "fixation," and the area seen by the eyes in a single fixation is known as the "eye-fixation span." The greater the span, the more words taken in and the more efficient is the reading.

The causes of reading difficulties may be physical, mental, emotional, environmental, or poor early training. If our reading ability is poor, it is obvious that we must find the causes of the difficulty and remove them. Some causes can be self-discovered, but some require the help of an expert reading teacher.

Students can improve their own reading ability by practicing on easy and highly interesting material, progressing gradually to more difficult material as comprehension and speed increase. Reading should be practiced daily and against time.

Increased vocabulary and better knowledge of sentence structure signalize improved reading ability. We learn to read by reading, and with practice we find ourselves able to "call the author's shots."

We must become critical readers to avoid forming adolescent judgments. The final purpose in reading is to learn from the author and to interpret his meanings correctly.

SUGGESTED FURTHER READINGS ON THE SUBJECT
OF READING

1. FREDERICK, ROBERT W., and BURTON, WILLIAM H. *How to Study Handbook*. D. Appleton-Century Company, Inc., New York; 1938.

This compact, pocket-sized volume of 442 pages is well organized and interestingly written. It is an up-to-date manual on how to study and contains reliable information on such subjects as reading for various purposes, writing, and listening. How to use the library is described in detail.

2. HILTON, JAMES. *Lost Horizon*. Grosset & Dunlap, Inc., New York; 1933. Page 186.

It is suggested that the student who finds it difficult to read a book from cover to cover try this one. The story is fascinating, and both moderate and voracious readers will find this Hawthornden Prize novel excellent reading. For practice reading this book qualifies in every respect.

3. ROBERTS, HOLLAND; RAND, HELEN; and TARDY, LAURISTON. *Let's Read*. Henry Holt & Co., Inc., New York; 1940.

Within these 629 pages is the best compilation of practice-reading material available to date. The articles, reprinted from various sources, cover a wide variety of subjects. For ease in checking rate of reading, the number of words is stated at the end of each article. The book also gives information on how to become a better reader and how to cultivate the habit of reading.

4. STRANG, RUTH. *Problems in the Improvement of Reading in High School and College*. Science Press, New York; 1938. Page 74.

Although this book of 380 pages is primarily for teachers, it provides worth-while reading for college students. Scientific findings in the field of reading are set forth in it. Information on "how to do," such as how to remedy faulty reading habits, is included.

5. TAYLOR, EARL A. *Controlled Reading*. University of Chicago Press, Chicago; 1937. Page 126.

This book of 365 pages will appeal to anyone who is interested in mechanics and the use of mechanical equipment in checking reading ability. The contributions of leaders in investigative reading research are compiled in one chapter. The book contains a very complete bibliography and is well indexed.

Other useful books in this field are:

ADLER, MORTIMER J. *How to Read a Book*. Simon & Schuster, Inc., New York; 1940.

EURICH, ALVIN C. *The Reading Abilities of College Students: An Experimental Study*. University of Minnesota Press, Minneapolis; 1931.

GRAY, WILLIAM S. "Reading Difficulties in College." *Journal of Higher Education* (October, 1936).

TENNEY, EDWARD A. *Intelligent Reading*. F. S. Crofts & Co., New York; 1938.

Chapter

6

TAKING TIME IN STRIDE

"We can retrace our steps in space, but never in time; we can move quickly, or slowly, or not at all, in space as we choose, but no one can regulate the flow of time — it rolls on at the same even uncontrollable rate for all of us." SIR JAMES JEANS

JEANS' declaration is breath taking when we grasp its full significance — "We can retrace our steps in space, but *never* in time." The minute just past is gone — forever, irretrievably gone. However, though we cannot stem the flow of time, we can regulate its use. Time can be made to work for us when we understand it. The old saying, "Time and tide await no man," is all too true; nevertheless, man has been able to harness both time and tide to his use.

Ancient philosophers differed as to the essential nature of time. Aristotle held that it is absolute and, in the metaphysical sense, bears no relation to what man does with it. Epicurus questioned this theory, saying, "It is impossible to conceive time in itself independent of the movement or rest of things." This is the understanding we have of time today. That is to say, it is something that is a part of every one of us as a human being. In his book, *A Guide to Civilized Leisure*, H. A. Overstreet states this well when he says:

“Time is no neutral thing that is what it is despite what we are. Time, in a large measure, takes on the complexion of ourselves. We can lengthen it or shorten it, fill it or empty it, make it into a thing of terror or into a rhythm of delight. If this were not so, we should simply have to resign ourselves as to an implacable fate. Since it is so, we can take time in hand, and, within limits, make it do for us much of what we wish.” (3)

Our sense of time is affected by the situation with which we are confronted. Time lengthens and hangs heavily on our hands when we have more of it than we need. On the other hand, if we have more to accomplish than the time allows, then it shortens. How often we hear students say, “I was so busy that this week simply shot by.” Time is relative to what we need to do and how long we have in which to do it.

We all know individuals who drop around for a chat when we are busy. If we ask one of them what he is doing, he may drawl, “Oh, just killing time.” His visit can scarcely be considered a compliment if we place any value on our own time. Some canons of good taste exist in regard to the use of others’ time, but they are often overlooked. It is good manners, certainly, for the person who has time to “kill” to inquire first of another whether he has time to spare. Those who disturb the activities and waste the time of busy people place themselves in the position of being known as “bores.”

Every person has resources to budget

In order to achieve success in any enterprise, the worker must draw upon a number of resources. The first of these is time; another is energy; others are physical fitness and mental health. We may add to these four kinds of assets

an obvious fifth — money. Upon analysis it will be found that, granting the importance of the others, time is the fundamental resource. Effective use of the other four is dependent upon the wise use of time, because when the student dissipates his time in too many activities outside the chief business of college, which is study, he wastes energy, his physical and mental health are likely to be affected, and it is probable that he spends his money unprofitably.

Time and money

The adage that time is money does not always commend itself to the student. The best example we have today of the money value of time is the high prices paid for it on radio networks. The student's time probably will not mean money to him until he begins to sell it on the market. If he is to think of time and money synonymously, he must do so with this long-range objective. In college his time is paid for in coin of the academic realm — that is, with grades and with other types of college compensation. In the student's daily life, then, time is valuable.

If we wasted money as so many of us throw away time, we would show a continuous financial deficit. Time in reality is more valuable than money, for it is irreplaceable. Ordinarily we need to use only a part of our time to earn enough money to meet our needs for food, clothing, shelter, and other living comforts. The rest of our time can be devoted to "purchasing" such living values as play, rest, social contacts, and cultural satisfactions. Even though money is a recognized necessity in daily living, it does not buy happiness directly. If we budget our time as successfully as good financiers budget their money, we will find ourselves receiving dividends of extra time. This greatest of

all assets then will be available in greater amounts for recreation and leisure, as well as for accomplishing our other purposes in life. Time properly used and conserved constitutes purchasing power to success and happiness.

Time and health

The wise use of time helps a student to keep physically and mentally fit. Effective health habits do not mean merely regular routine physical exercise. While moderate exercise is a recognized essential, there are many other elements involved in keeping the bodily machine in good working order. Almost everyone knows the value of a balanced diet and fresh air. Care of the eyes, and sufficient rest when tired, are two important factors which are frequently overlooked.

Mental health may be greatly impaired by fatigue. In a time schedule, the rest period compares in importance with the work period. Avoiding undue fatigue is the first rule for keeping physically and mentally fit. Fatigue caused by continued over-exertion results in depressed states of mind. On occasions one may over-indulge in food or drink, or lose a night's sleep, and still appear fit on the following day. But one does not recuperate so easily from the effects of continuous bodily dissipation.

Accomplishment brings joy and satisfaction. As is well known, fatigue is at a minimum in a successful, advancing army. Such is the case, too, when we meet course requirements promptly and efficiently. The student who feels his work is going well is not likely to become bored, resentful, or worried. When a specific hour is set aside for the completion of a task, it constitutes a definite goal. When one succeeds in reaching that goal, even though it is only an assignment in French or a problem in mathematics, mental comfort and satisfaction follow.

Good habits of work tend to lessen troublesome worries and physical complaints. When a well-planned schedule of time is put into operation, one's mental health usually improves. Planning proper distribution of work and leisure time eliminates pressure and physical and mental discomfort. When a student follows a work plan, he makes it possible to accomplish a variety of tasks and yet to integrate his total scheme of work.

In the financial world we speak of diversifying our investments to insure safety. We need also to diversify our thoughts and interests to insure happiness. Any effective schedule includes time for diversion and pleasure, which are requirements for good physical and mental health. Theodore Roosevelt believed in the adage, "Work when you work, but play when you play." However, the distinction between work and play is not always easy to make. Some work, such as an unusually interesting assignment, seems like play. Some play seems like work, as in the case of a golfer who is anxious to reduce his score.

When a student registers for a college course, time for his class sessions is arranged by the faculty. The remainder of his time supposedly is managed by the student himself. Wise use of this and of one's other resources — energy, physical and mental health, and money — indicates successful and effective adjustment to life.

Twenty-four hours a day to distribute

Americans, both college students and their elders, object as a rule to being regimented. They dislike to follow blindly orders given by others. This trait is born of the democratic environment in which we live. For this reason an almost superstitious reverence is paid to the

idea that things will be accomplished somehow. Planned regularity in study often is considered oppressive to a free spirit and to creative intelligence. Analysis will show the reverse to be true. The student who achieves self-control in his activities, and who sets up an effectual time schedule, finds that he actually has acquired more freedom. Some students oppose time-budgeting, probably because it takes real energy and effort to work out a good schedule, but the wise student profits by the experiences of others and early in his college career begins to order his affairs with the help of a time schedule.

When we use the term "budget," our associative memory reminds us of money. It is helpful to compare time schedules with money budgets, because they have so much in common. Money is clearly seen as a definite and tangible thing. When it is gone, everything must wait until funds are replenished. Every business and professional man has certain fixed expenditures, such as rent, taxes, heat, light, water, food, clothing, entertainment, and pocket money for the members of the family. Every individual must spend specific amounts for necessities in order to live. In any well-planned budget, emergencies also are provided for. All these items need to be entered into the money budget as necessary expenditures.

In contrast with this understanding of the limited service of money, many persons regard time as inexhaustible. They see the importance of conserving their financial resources but fail to draw the parallel with time resources. Nevertheless, time does not flow on endlessly or in limitless amounts. We must divide our hours — so much for ourselves and so much for the world we serve. In budgeting his time, the college student, like everyone else, must allot fixed amounts of time to be spent on various aspects of the job of living. His daily allowance is 24

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hours. How should he distribute them? Using the number of hours in the week as a basis, we find 168 hours at the student's disposal. The fixed expenditures of these hours will line up somewhat as follows:

Sleep	56 hours
Dressing, bathing, eating	21 hours
Attending classes	15 hours
Preparing for classwork	<u>30</u> hours
Total of fixed time-charges	122 hours

If the 122 hours are properly scheduled, the student will have 46 "extra" hours a week at his disposal. On the basis of 7 days in the week, this is an average of $6\frac{1}{2}$ "extra" hours a day, which apparently is plenty of time for a student's other activities. If he spends 2 hours a day on sports, he still has $4\frac{1}{2}$ hours a day for other recreation, free reading, and social activities. When we place time on a schedule, then, we find that we have time left over. Here lies the freedom we are seeking; here is that precious extra time we all need so much.

Arnold Bennett wrote a small book on *How to Live on Twenty-four Hours a Day*. Speaking of the businessman, he said:

"He persists in looking upon those hours from ten to six as 'the day,' to which the ten hours preceding them and the six hours following them are nothing but a prologue and epilogue. Such an attitude, unconscious though it be, of course kills his interest in the odd sixteen hours, with the result that, even if he does not waste them, he does not count them; he regards them simply as margin." (1)

Should the student look upon the hours from eight in the morning until four or five in the afternoon as his "day," he finds a number of "marginal" hours before and

after this period. The student who needs more than the average time to complete his work satisfactorily must extend his study into these "marginal" hours. If he develops the feeling that this is an injustice, because other students do not need so much time, he is faced with a mental-health situation which may spell disaster.

One of the realities that less able students have to face is the fact that to accomplish the same results they need to apply themselves for a longer time than the average student, and much longer than the superior student. This is the crux of the proper distribution of time for the accomplishment of college work. The average student will do "C" work with about thirty hours of study a week, whereas a superior student may expend no more than ten hours a week to achieve similar results. However, the latter is unfair to himself and to society if he is satisfied with this amount of effort. The student who has poor native ability should expect to spend fifty hours a week to do "C" work. One who knows that he is slow in getting the ordinary amount of work done must not expect to accomplish as much in a given time as does one who has greater ability. If the slow student studies only ten or fifteen hours a week, he will most certainly fail. In order to remain in college he must face this fact and plan his time accordingly. Furthermore, the extra time needed for study must not be taken from the time that he needs for sleep, rest, and exercise, or his physical health and energy may become impaired.

The schedule masters time

It is easy to talk theoretically about budgeting personal resources. If the theory is good, the practice should be good, but in budgeting time it is always difficult to put theory into practice. The difficulties involved in starting

to keep money accounts make an excellent parallel. We start out on New Year's Day, say, with a reminder date book. We plan to write in it the money we spend in January. We believe thoroughly in the value of the plan, yet nine times out of ten we fail to keep it up. Living up to a schedule of time is no less difficult.

There is only one way to make a time budget workable, and that is to build it within reason. If a student is to live by it, the construction of this schedule must conform to his individual pattern of conduct. It must fit his personality. This is one place where we must not set our model in terms of what might be, or in accord with the way someone else works.

A good way to develop a time schedule is to begin by keeping account of our time as we actually use it. It is suggested that the student make several copies of a schedule sheet following the general plan of that shown on page 136 and keep them in his notebook for ready use. He can then list daily for a while the hours devoted to his various activities. For example:

7 : 00 A.M. Arose, washed, and dressed for breakfast.

8 : 00 A.M. Went to first class.

9 : 00 A.M. Studied English.

And so on, right through the day. After a few days, a picture of the day's usual events enters a frame of reference. In the construction of a schedule based upon such data the student should of course consider the possible desirability of some changes in his customary uses of time.

From an inventory of time actually spent, we can proceed to make up a tentative weekly schedule. This should be judged by two criteria: (1) the extent to which it shows our own needs and habits of work; and (2) how well it organizes our time in terms of our own personality and the problems to be met.

STUDENT'S INVENTORY OF TIME SPENT

Name _____ Date _____

ACTIVITY	STARTED	FINISHED	TIME SPENT
MORNING			
Arise	_____	_____	_____
Breakfast	_____	_____	_____
Classes:	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
Study _____	_____	_____	_____
Relaxation _____	_____	_____	_____
AFTERNOON			
Lunch	_____	_____	_____
Classes:	_____	_____	_____
_____	_____	_____	_____
Study _____	_____	_____	_____
Physical Education	_____	_____	_____
Relaxation _____	_____	_____	_____
EVENING			
Dinner	_____	_____	_____
Activity _____	_____	_____	_____
Study _____	_____	_____	_____
Relaxation _____	_____	_____	_____
Retire	_____	_____	_____

Directions. Fill in detail regarding activity in first blank, including place of study and type of activity. Fill in the time of beginning in second column, time of finishing in third column, and total time in last column.

Principles involved in a workable schedule

After the tentative time budget is made up, it should be thoroughly tested in operation for a week or more. If conflicts are found or time allotments need to be increased or decreased, these changes can be made. When the schedule assumes a form which appears to be one that can be lived up to, it then is ready for adoption.

A few specific suggestions on how to make and to use a schedule follow:

(1) *First make the entries of fixed activities.* The complete class schedule should be entered. For example, an English class may convene at nine o'clock on Mondays, Wednesdays, and Fridays. These are periods designated by the college authorities and allow for no variation.

(2) *Schedule the periods for preparation of class work.* For example, the English class mentioned above is a three-hour course. If you are an average student, you should assign at least six hours during the week to preparation in this course. To take advantage of the law of recency in learning, the English study hours should be near the class period on the fixed schedule. It is advisable, also, to insert in the schedule a fixed place for study each day, and to make a habit of studying each subject in the same place each day.

(3) *Make an inventory of those things in college that are most important to you.* Are you seeking grades, friends, athletic or social leadership, or basic work for your vocation? When you have determined these needs, the schedule can be made to provide time for them.

(4) *Observe your working hours and note carefully whether you are most efficient in the morning or in the evening.* Then schedule the period of highest efficiency for study of the most difficult subjects.

(5) *Provide for recreation, relaxation, and rest.* This probably is the most difficult budgeting problem. One will need to try out his schedule, and then inject rest periods where they are most needed and enjoyed. Students who go out for organized athletics can arrange fixed hours for this phase of their recreation.

(6) *Avoid monotony.* Some individuals find that fatigue results from too much sameness of work. It is desirable to alternate the kinds of activities; for example, to study mathematics between periods spent in preparation of assignments in French and English.

(7) *Provide for emergencies.* Examinations or special reports may bring strains upon the schedule. It is wise to have in mind certain periods when such extra assignments can be completed. Even so, the day seldom runs exactly as planned. After a schedule has been used for a time, the student will become accustomed to meeting emergencies without disturbing his program too seriously or getting too far away from its provisions.

(8) *Plan the schedule so that if it becomes unworkable, it can be modified.* Here is the secret of making a time budget function. Many students who work on the "all or none" basis become discouraged when they are unable to follow the regimen they have set for themselves. The tendency when this occurs is to "scrap" the whole thing. On the other hand, when a student follows a schedule, even if only in part, he finds that he can adjust it to suit his needs and that he thereby can expand its operation.

(9) *Look toward balance in the time budget.* A well-planned, balanced day keeps one on an even keel. After a period of successful use of such a schedule, habit plays a strong part in helping the student conform to it.

On page 139 is a weekly schedule actually made out and followed by a successful student. Incidentally, he was

COLLEGE STUDY SCHEDULE

HOURS	MON	TUES.	WED.	THURS.	FRI.	SAT	SUN.	HOURS FOR
7 : 00-7 : 30	Dress	Dress	Dress	Dress	Dress			
7 : 30-8 : 10	Bkfst.	Bkfst.	Bkfst.	Bkfst.	Bkfst.	Dress	Dress	
8 : 15-9 : 05 1st Period	English Class Aud	Orient. Class 100	Orient. Section 116	Orient. Class 100	English Class Aud.	Bkfst.	Bkfst.	<u>5</u> Class Study Free
9 : 10-10 : 00 2d Period	Lit 150		Lit. 150		Lit. 150	Study English Dorm.	Study French Dorm.	<u>3</u> Class <u>2</u> Study <u>2</u> Free
10 : 05-10 : 55 3d Period	Study French Lib.	Study French Lib.	Study French Lib.	Study French Lib.	Study French Lib	Study English Dorm.	Study French Dorm	<u>7</u> Class Study Free
11 : 00-11 : 50 4th Period	French Class 103	French Class 103	French Class 103	French Class 103	French Class 103			<u>5</u> Class Study Free
12 : 05-12 : 50	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch	
12 : 55-1 : 45 5th Period	Phys. Science 110	Study French Dorm.	Phys. Science 110	Study French Dorm.	Study French Dorm.			<u>2</u> Class <u>3</u> Study <u>2</u> Free
1 : 50-2 : 40 6th Period	Phys. Science 110	Study Phys. Sci. Dorm.	Phys. Science 110		Study Phys. Sci. Dorm.			<u>2</u> Class <u>2</u> Study <u>3</u> Free
2 : 45-3 : 30 7th Period	Phys. Science 110	Study Phys. Sci. Dorm.	Phys. Science 110		Study Phys. Sci. Optional			<u>2</u> Class <u>2</u> Study <u>3</u> Free
3 : 30-5 : 00	Phys. Educ.	Phys. Educ.	Phys. Educ.	Phys. Educ	Phys. Educ.			<u>7½</u> Sport Study Free
5 : 00-6 : 00	Study Orient. Dorm.	Study Orient. Dorm.	Study Orient. Dorm.	Study English Dorm.				<u>4</u> Study <u>3</u> Free
6 : 00-7 : 00	Dinner	Dinner	Dinner	Dinner	Dinner	Dinner	Dinner	
7 : 00-8 : 00	Study Orient. Lib.	Study Lit. Lib.					Study Lit. Lib.	<u>3</u> Study <u>4</u> Free
8 : 00-9 : 00	Study Phys. Sci. Dorm.	Study Lit. Lib.	Study Phys. Sci. Dorm.	Study Lit. Lib.			Study Lit Lib.	<u>5</u> Study <u>2</u> Free
9 : 00-10 : 00	Study English Dorm.		Study Phys. Sci. Dorm.	Study Lit. Lib.				<u>3</u> Study <u>4</u> Free
10 : 00 and later								<u>7</u> Study <u>56</u> Free Sleep

Student's Name John Doe *Total Study Hours* 31 *Free Hours* 35
Counselor Mr. Anderson *Class Hours* 15 Units-19 hr. *Activities-Sports* 7½

("Aud.," and numbers refer to classrooms; "Lib." and "Dorm." to usual place of study.)

successful also in his other college activities. His "free" hours are left blank in this sample of his schedule because his use of them varied from week to week. His recreational reading, tennis, and other sports, committee work for social and athletic events, and other forms of social and recreational activities were fitted into his "free" hours. Naturally, fixed items will differ for each student and for each set of circumstances. Anyone who develops such a schedule for himself, however, will find it to be extremely useful.

Timing is important for productive results

It is not uncommon in baseball to see a batter step up to the plate with an air of confidence, swing mightily, and yet "fan out." Another batter steps forward. He studies the pitcher, the runners, the positions of the opposing players. Then he concentrates every effort on hitting the ball and placing it where it will do his team the most good. It is not merely poise that makes a hit — it is the proper combination of mind, eyes, and muscles, coupled with exact timing. In study, as in baseball, we see earnest students figuratively "fanning out" when results are considered.

Many of us habitually expect to be rewarded in proportion to the efforts we make. The college student must realize that his instructors are going to grade him entirely upon the results he produces, not upon the number of hours he works nor the quality of his mental equipment. The "pay-off" in college, as in the business and professional world, is not made in terms of effort and energy expended. The individual who feels sorry for himself because he is working hard and not getting results should wake up and learn how to make his efforts count.

The emotions in relation to the time budget

It is phenomenal what a good schedule will do for one's emotional balance. For example, should one receive a lower grade in an examination than was expected, he may become so emotionally disturbed as to be "knocked out" for the remainder of the day. Work is one of the best-known sources for relief from disappointment or chagrin. Following the schedule diligently, accomplishing routine tasks, and working earnestly and persistently should help to dissipate these emotional disturbances. This may be designated a first lesson in how to "take it in stride."

The receipt of bad news or facing a situation involving conflict is upsetting to most individuals and may even cause physical disturbance. Medical science has learned that worry causes actual physical suffering. Conforming to a time budget which holds him to the job gives the student something definite to do besides worry, whether his problem has to do with his social world or his fear of an impending examination. In any case, if he adheres to his schedule and avoids needless worry, he is less likely to fail. With practice, the student will learn the wisdom of this idea that work is the best antidote to worry and conflict.

A long-range view of the time budget

Overstreet states clearly the long-range view of budgeting time as follows:

"There is a difference between being carried along the earth in a swift railroad train and contemplating the moving train from the mountain-top. When we are on the mountain-top, we see the train with all its surroundings in a larger frame of reference. We can note where it is going, can see its relation to the environing lay of the land.

It is something of this mountain-top vision that we need to achieve if we are to liberate ourselves from the tyranny of the time-flow." (3)

Thus time can be measured and spaced to balance work and play. The schedule spaces and balances this time-flow. It is a general plan of the day, not something to be followed slavishly. When one accepts a time budget as a law that cannot be broken, he is left spiritless. It is easy to become disturbed and to feel that one is in a hopeless race to catch every fleeting moment. The purpose of a time schedule is to avoid that sensation, not to increase it by binding each minute and hour in heavy chains.

Many of our activities can be so ordered that we need not think of time at all. The day's necessary activities can become so habitual that we go about our tasks systematically and without stress or strain. Orderly living is a natural budgeting of time and a rational use of its resources, not slavery to a clock. People in general and students in particular cannot be warned too often that values are relative and subject to change. Interrelationships determine values, not things or experiences in themselves. To master our objectives we need to give a just proportion of our time to each of our various activities. As maturity approaches, an ability to see the values of things in proper perspective should become a part of our unconscious wisdom.

Why do persons who need help in a public cause go to the very busiest of men and women in their communities for committee work? The simple answer is that these persons budget their time. If such persons say they will give time, their promise can be relied upon. They know when they have time to spare. In college the students who contribute most effectively to college activities usually

are the individuals who plan their time. Students who properly budget their time do not as a rule fail in college. On the other hand, regardless of their native ability, students "flunk out" when they devote too much time to unscheduled, aimless activities.

Budgeting time constitutes prudent living

Most students look forward to the time when they will be managing their own affairs in business, in a profession, or in the home. The student who schedules his time in college is more likely to plan and organize his work in a business or a profession. When girls marry they do not look forward to spending all their time in housekeeping and the care of children. They hope to conserve their energies so that there will be opportunity for broader experiences and a wider cultural outlook. If the use of a schedule to control wisely the expenditure of time and other personal resources is learned in college, it should be of lifelong practical usefulness to the individual.

The student may well take a leaf out of the book of the business or professional person. One in active life proceeds to his office or place of business at a scheduled time in the morning. After a day which usually follows an orderly schedule, he is through each evening at about the same hour. Were the college student actually to start work at eight in the morning and continue through until five in the evening as regularly as the clock turns its hands, there would be few failures in college. If time taken out in the afternoon for recreation is made up in the evening, the student's work day is approximately as long as that of the business or professional man. When he understands the need for regularity and conscientiousness in meeting college assignments, he has laid the foundation for a successful college career.

Werner, in a chapter entitled "The Wise Use of Time, Effort, and Money," states:

"The efficient student uses all the means at his disposal to secure with them the best possible return. He studies his purchases, watches sales, visits shops, and examines articles of clothing or food before he purchases. He likewise watches for special opportunities to do his work efficiently. If he has a reference to read in the library, he avoids going there during the busy hours of the day, but goes during the slack hours. The writer uses Monday mornings or Saturday afternoons or evenings to do his library reading. Usually at these hours the library is almost deserted. He can get the book or magazine that he wants, and he can accomplish in a short time what it would take hours to do at a more crowded time of day. In college life as elsewhere, common sense plays a very important rôle." (4)

After all, why plan the day?

It is well known that we feel tense when we are under pressure to get our work done. Modern life has brought more and more strain as its complexity has increased. The human being must adapt himself to these changes and find better ways to meet the stresses and strains of modern civilization. Primitive man also had problems to meet, but as a rule he had more time for complete relaxation. The age in which we live requires that we set aside a portion of each day for rest as well as for our daily tasks. Individuals vary in the amount of "drive" their bodies and minds can stand, but we all need periods when we can feel completely free to relax and throw off the burdens of life without any feeling of guilt.

"Work when you work but play when you play" is easier said than done. To plan ahead for the week or the month so that certain definite periods of relaxation may be used for getting away from the customary pressures requires skill and foresight. It nevertheless is a valuable element in a philosophy of life. The art of wholesome relaxation without self-condemnation is one of the fundamentals in the science of living. Learning to budget one's time and other personal resources is a means to this end.

Planning our lives by managing the most precious asset we have, time, seems an obvious thing to do. College men and women are at the right time of life to make good living a habit. It is an established fact that our nervous systems grow to the modes in which they are exercised. William James said that this "expresses the philosophy of habit in a nutshell." James emphasizes the fact that "*habit simplifies the movements required to achieve a given result, makes them more accurate, and diminishes fatigue.*" (2) There is no habit more important for the college student than that of budgeting his resources.

Quoting further from James's classic chapter on "Habit":

"Let no youth have any anxiety about the upshot of his education, whatever the line of it may be. If he keep faithfully busy each hour of the working-day, he may safely leave the final result to itself. He can with perfect certainty count on waking up some fine morning, to find himself one of the competent ones of his generation, in whatever pursuit he may have singled out. Silently, between all the details of his business, the *power of judging* in all that class of matter will have built itself up within him as a possession that will never pass away. Young people should know this truth in advance. The ignorance of it has probably engendered more

discouragement and faint-heartedness in youths embarking on arduous careers than all other causes put together." (2)

SUGGESTED FURTHER READINGS ON THE SUBJECT
OF TIME BUDGETING

1. BENNETT, ARNOLD. *How to Live on Twenty-four Hours a Day*. George H. Doran Company, New York; 1910. Page 31.

Although written a number of years ago, this small book of seventy-five pages is most refreshing reading. The author says the book is addressed to "the man who is braced to effort neither in the office nor out of it." It is as apt as if it had been written yesterday.

2. JAMES, WILLIAM. *The Principles of Psychology*. Henry Holt & Co., Inc., New York; 1890. Vol. I, pages 112, 127.

Although William James wrote his classic chapter on "Habit" about 1890, it still stands as an authoritative treatment of the subject. The student who fails to read it has left something out of his life. The Holt Company has published this chapter in a separate small volume which students may purchase economically for their own libraries.

3. OVERSTREET, H. A. *A Guide to Civilized Leisure*. W. W. Norton & Co., Inc., New York; 1934. Pages 164, 167-168.

This is a short, worth-while, up-to-date, and easily read book of 257 pages. It can well be considered a modern philosophy of living. It sketches such subjects as ways of leisure, of exploring our environments, and of taking stock of ourselves.

4. WERNER, OSCAR H. *Every College Student's Problems*. Silver Burdett Company, New York; 1929. Pages 29-30. The selection on page 144 is reprinted by permission of the publishers.

This book was written for college students and has been used a great deal in general orientation courses. It contains some 375 pages, is well written, and is interesting to read. It contains an exhaustive bibliography on every related subject in which a college student will be interested.

Taking Time in Stride

Other useful books in this field are:

BARNES, RALPH M. *Motion and Time Study*. John Wiley & Sons, Inc., New York; 1937.

BENNETT, M. E. *College and Life*. (Revised.) McGraw-Hill Book Company, Inc., New York; 1941.

HAMBIDGE, GOVE. *Time to Live: Adventures in the Use of Leisure*. McGraw-Hill Book Company, Inc., New York; 1933.

SEASHORE, CARL EMIL. *Psychology in Daily Life*. D. Appleton-Century Company, Inc., New York; 1927.

Chapter

7

BUILDING ON OUR CULTURAL HERITAGE

"To each is given a certain inward talent, a certain outward environment of Fortune; to each, by wisest combination of these two, a certain maximum of capability." THOMAS CARLYLE

As Carlyle says in his *Sartor Resartus*, quoted above, each of us has been given a talent. Along with this we have been surrounded by conditions and forces which have influenced us in becoming what we are today. Our capabilities are developed to the greatest degree when we achieve the best interaction between our endowment and our environment.

Nature and nurture

Nature and nurture are two variables, often listed as separate influences, which affect personality growth. It is said that nature endows an individual with whatever abilities he possesses. The nurture, or training, which environment provides for him affects the development of his natural abilities and, consequently, of his personality. The time-old question, "Which is of greater importance in human development, heredity or environment?" is still controversial. Being wellborn is a great advantage

to the individual, but no one doubts that environment helps to determine what he makes of his heritage.

For our purposes in discussing ways of improving one's background, we shall regard heredity and environment as mutually interactive. By heredity we mean the mental and physical aptitudes with which we were born. Environment contains those factors that cause us to use our inborn traits the way we do. The interrelationship of these two forms our background. It is nature *and* nurture that we must consider in actual life, rather than nature *versus* nurture, which is an academic question. Although native ability is of primary importance, it must have opportunity to develop. This opportunity varies for different individuals. Those who have been spoiled for life by over-indulgence while young need strong guidance when they face difficult choices affecting their development. Even wealth does not necessarily compensate for a weak personality. On the other hand, the necessity for facing adversity has been a factor in the success of many strong personalities.

There are, of course, some individuals of unusual talent and sustained ambition who are successful in their life work despite disadvantageous backgrounds, but most persons are strongly influenced by their early surroundings and training. These determine for them, in a general way, the kind of lives they will lead. Early environmental influences in the home, school, and neighborhood contribute greatly to success or failure in life. Thoughtful parents and capable teachers are responsible for much of our personal growth in early life. After we pass through high school and enter college, we must make our own choices in regard to our learning and to our personality development.

Background is the framework upon which each one

constructs his life. In its make-up physical heritages, mental endowments and acquisitions, and cultural influences are blended. Background may be acquired either unknowingly or as the result of careful planning. Conventions and manners are its sign manual. They mark the conduct of the well-bred man or woman. Continuing our metaphor, where the framework is well knit and sturdy, the possessor's life will be strong and useful.

The broad aspects of culture patterns

The total of the influences or social forces that have changed animal nature to human nature we speak of as culture. These include such diverse things as the use of fire, tools, agriculture, shelter, and social customs like marriage and taboos.

Culture establishes patterns of thought and behavior. Groups have their social customs, and individuals therein are molded to conform. The individual advances in general knowledge and social behavior because of the effect of the culture pattern. Throughout life he is touched at every point by some measure of cultural influence.

There are in the world today two great civilizations which differ basically. These two cultures are known as Oriental and Occidental. Oriental culture is that of the peoples of the areas known as the Asiatic countries. The Occidental geographical grouping includes Europe, Australia, and the Americas.

Basic culture differences account for the great difficulty which the Occidental mind has in understanding the Oriental, and vice versa. The differences between the two culture patterns are so great that even today, with all the improved means of communication and transportation, they constitute a real barrier to understanding. This is a very real problem here in America, where even second-

and third-generation Orientals retain much of the Eastern culture.

Accurate knowledge of the cultural patterns which define the backgrounds of whole peoples is of importance in understanding how social backgrounds influence individuals.

Effects of culture patterns

The effects of culture patterns in shaping the behavior, personality, and thinking of the individual are made clear by many examples in such books as Warden's *The Emergence of Human Culture* and Benedict's *Patterns of Culture*.

Warden outlines three stages in human cultural development. Of the first of these he says:

"The first phase of the direct cultural process consists essentially in the proper domestication of the infant. The elementary bodily functions are brought into harmony with the customs of the group by imposing simple habits of restraint. Such activities as feeding, elimination, crying, sleeping, and the like are patterned as to time, place, and mode of performance." (8)

One's behavior in the social group is strongly shaped in these early years. For example, the infant who is given things or attentions he wants because he cries for them may develop a habit that persists. As a result of this he may become a person who constantly complains or "moans" about things that happen. Other habits associated with infant training also may become relatively permanent.

After infancy, the next stage of human development is the acquisition of language. Of this Warden says:

"After the language age is reached, the influence of culture upon the child is increased a thousand-

fold. Language itself should be regarded as a complex set of bodily habits which comes to replace the simple and inarticulate gibberish of the infant. The specific language patterns are imposed by the group in one way or another. The meaning of the vocal habits and of the sounds produced are likewise fixed by the conventions of the group. . . . The attitudes and beliefs of the group gradually become those of the child. . . . The period of childhood is thus one long experiment in cultural habituation." (8)

In this learning of language, however, the young tend to rebel at the amount of conformity required of them. For example, many students dislike the formal study of English. Most young people actually would like to have a good command of English but find the process of acquiring language facility painfully tedious. There is a long heritage in the language element of our culture and time is needed to acquire it. If the individual sometimes appears to be antagonistic to this training, the antagonism is not directed primarily against the culture but against its disciplines.

We have spoken of infancy as the first stage of our culture acquisition and of language learning as the second stage. The third stage is the one that ushers in maturity. In this connection Warden points out:

"As maturity approaches, the social regimen becomes more and more exacting. The newly emerging animal impulses of the adolescent are placed in restraint by the customs regulating love-making and the sex life. Moral sentiments are inculcated and many additional duties and obligations are imposed. Conformity with group norms of conduct takes on a new importance because of its relation to personal success and prestige. . . .

The adult is never released from the check of customs, laws, and institutions. And, in the end, the acceptable modes of death and burial are more or less prescribed by the group mores. In brief, the whole pattern of human life, from the cradle to the grave, is cast in a cultural mold from which there is no escape." (8)

To speak of domesticating the infant or of controlling the young savage may lead to an erroneous idea of how the individual becomes socialized. We are prone to think of all individuals as nonconformists and of society as a tyrant which forces the individual to behave in a way contrary to his best interests. Ruth Benedict puts the matter more clearly:

"The man in the street still thinks in terms of a necessary antagonism between society and the individual. In large measure this is because in our civilization the regulative activities of society are singled out, and we tend to identify society with restrictions the law imposes upon us. The law lays down the number of miles per hour that I may drive an automobile. If it takes this restriction away, I am by that much the freer. This basis for a fundamental antagonism between society and the individual is naïve indeed when it is extended as a basic philosophical and political notion. Society is only incidentally and in certain instances regulative, and law is not equivalent to the social order. In the simpler homogeneous cultures collective habit or custom may quite supersede the necessity for any development of formal legal authority. American Indians sometimes say: 'In the old days, there were no fights about hunting grounds or fishing territories. There was no law then, so everybody did what was right.' The phrasing

makes it clear that in their old life they did not think of themselves as submitting to a social control imposed upon them from without. Even in our civilization the law is never more than a crude element of society, and one it is often enough necessary to check in its arrogant career. It is never to be read off as if it were the equivalent of the social order." (1)

The individual constantly makes adjustments to his culture. In this process of molding himself to his environment, the average person does not rebel against society; he dislikes only the laws that his society has made which inconvenience him personally. Once he really understands the necessity for such laws, he finds it easier, more profitable, and more comfortable to conform. It should be pointed out, however, that society is not static; it evolves and changes as its individuals change. Culture follows patterns and the individual helps to make the pattern. The great philosophers, statesmen, artists, scientists, and founders of religion have exerted powerful influences in this respect. Individuals in a society are the component parts of that society and the whole becomes what the individuals collectively make it.

To gain a background of knowledge for the understanding of human beings, study in the field of anthropology, the science which investigates the human species, is helpful. It should be apparent from the material quoted above that one's behavior and personality are shaped by the culture into which he was born and in which he lives. Through a process of conditioning, the habits and customs of the people around him become part and parcel of him. That these cultural forces run deep is a fact about which no individual can afford to deceive himself.

It is not difficult to guess what would happen if an

Eskimo were suddenly transplanted to New York City. His pattern of conduct, acquired from Eskimo culture, would seem strange indeed to New Yorkers. Conversely, the habits of conduct socially inherited by the New Yorkers would be equally strange to the Eskimo.

Persons representing many different cultural backgrounds are to be found on an American college campus. Those who are quite different in behavior or appearance usually have come from foreign countries. Those from urban centers are likely to differ in characteristic ways from those who have grown up in small mountain hamlets or in the wide-open spaces. In a large country such as ours we have within a general culture many sub-cultures which exert their influences upon individuals.

The case of a young man who came from a large ranch illustrates the culture pattern of the wide-open spaces at work in a college community. Rex found it very difficult to adjust himself to college life. One would think that a horse is a horse in any land, but to him a horse at college was not the same as a horse on the big ranch. Rex had his own saddle, bridle, chaps, and other paraphernalia, which he kept in his room; he had records of cowboy songs for his small phonograph; in an attempt to create the ranch atmosphere he would strum on his guitar and sing "Give Me My Boots and Saddle" until his associates in the dormitory rebelled. But still he could not duplicate his former environment. He continued to be homesick for the open spaces; nothing could overcome his yearning for home.

Despite all the good counseling he received, Rex could not free himself from influences of his earlier background. One of his teachers who took a friendly interest in him finally asked him one day, "What is there about the college that could be changed to make you like it here?"

Rex replied, "It isn't the college, sir; it's just 'me.' The only change that could be made would be to make a ranch out of the college."

Rex's case may seem extreme, but his early life had been so all-possessing that its influence made it impossible for the boy to adjust himself to the circumstances which were created by his mother's desire that he attend college. Rex endured his one year of academic life for her sake; he did not return for a second year.

Although few of us are molded as completely by a certain background as Rex was, yet all of us suffer the results of environmental influences that we never quite overcome. We are fortunate if our early conditioning coincides with our life's ambition, but that does not always happen.

Everything we do in life is an experience. We are building background by active experience when we read about things, hear about them, see them, or actually do them. An individual is not necessarily an adult when he becomes twenty-one years of age. It is his background of experience and knowledge and the way he uses it that determine whether or not he is adult-minded.

Our cultural heritage

The material goods we inherit are of trifling importance in comparison with our cultural heritage. How great the latter bulks is impressively set forth in the following statement by Ward, Booth, and May in their book entitled *Earning Our Heritage*:

"We are the heirs of all the ages, which is to say that we inherit from our forefathers the accumulated wisdom that through generations they have distilled from experience and bequeathed to us. . . . In reading books, we relive the race's experience, rethink its thoughts — in a word, possess ourselves

of the past in order that we may understand and live abundantly in the present and ultimately enrich the legacy of life-lore we in turn leave our children." (7)

The riches to be had from the cultures recorded in history and literature supplement the culture which each individual has acquired from his own particular environment. If that environment has given him much knowledge gained from books, art, music, conversation, and other experiences, he is fortunate. On the other hand, should the student come from an environment where good reading matter and other environmental experiences conducive to personal growth are absent, his urgent need will be to make good the deficiency.

The cultural heritage is all around us, and a college education offers the opportunity for its acquisition. It is true that one can acquire a solid foundation of culture without going to college. However, the storehouse of accumulated knowledge which affords an effective environment for this is probably presented more efficiently in college than elsewhere. In a word, education is background building, and the basis upon which we build is our cultural heritage.

Culture is not something to be memorized so that we may become walking encyclopedias of it. Students are subjected constantly to instruction involving application of the culture of the past to present-day life. The natural reaction is to place an odious connotation on the word "culture." Frequently it is given the connotation of "highbrow," which spells pretense or affectation. This, of course, is not at all the true meaning of the word.

It becomes increasingly clear that the individual, in addition to being the direct product of a culture, must construct his own background of culture. Goethe, the

great German poet and philosopher, said, "What you have inherited from your ancestors you must earn in order to possess it." We must make our cultural inheritance a part of ourselves by making it a part of our own conduct pattern.

Motivation in developing our cultural heritage. No one denies that human nature requires motives and incentives to bring about successful action. Recognition of the necessity for personal motivation is the constant key to achievement. By the time a person reaches college age he usually knows that he does best those things in which he has a real interest. When, then, are we ready to acquire the knowledge prerequisite to dealing with any situation successfully? Unquestionably at the time when we need that knowledge. Building an educational foundation must be timely; it should be closely related to the period when one is ready to make use of it.

A college student who had worked in a bank told an interesting story that illustrates this state of readiness. In his own words: "When I was in school I sometimes brought home poor grades in arithmetic. My father tried to explain it to me but, since he spoke always about practical business mathematics, interest rates, and so on, I was not interested at all. One day after I had left school, Father brought me the news that I was to begin work in the bank the next day. Oh, did I worry! That evening Father thought it necessary to give me one of his lectures on mathematics. I can tell you I paid attention that time! I didn't rest until I understood it thoroughly. Father was surprised. It was the first time I ever had learned anything from his explanations."

Not until he became interested was he motivated to learn arithmetic. To succeed in doing his work in the bank accurately became his incentive. This was no

passive situation. It was a demand for mathematical skill, with his whole being on trial. With the need to perfect himself in that field, the period of readiness had come.

What were the factors in this case? While he was in elementary and high school, this student had not associated his arithmetic with anything useful to him. School offered arithmetic as a social heritage. The Arabs had worked out a number system and this had been handed down to him through the ages. However, it had never occurred to him that in number concepts there was a useful power. When he was called upon to make use of his heritage in mathematics, he was unprepared to do so.

First things must come first. A student soon finds when he enters college that in some of his courses he progresses easily and in others not so readily. Some courses require many more hours of study than others. One explanation is that in some studies he has previously acquired knowledge to which he can add the new; in others he starts practically from "scratch."

In college catalogues the student frequently sees the notation that some specific course is a prerequisite to the one he wants to take. The teacher knows from experience that it would be difficult, if not impossible, for the student to take the advanced course before he has had the preparatory work. However, background for a course does not come necessarily from formal study; it may be acquired by self-guided reading or other experiences.

There is a word that expresses this kind of preparedness — it is "orientation," a word meaning to put oneself into correct relation. Orientation to life's processes is attained when one consciously recognizes his ability to see ahead and to know when he is ready for the next step in his individual progress. When one does not respond to the

cultural heritage of the society in which he finds himself, he cannot claim good orientation. The culture patterns of the college are in some ways different from those in the "university of hard knocks." In college it is a matter of take it or leave it. To be motivated, it is necessary for one to realize that there is real use for the accumulated knowledge of generations. It becomes evident that culture makes the mind what it is to the extent that the mind uses its cultural resources. A foundation of knowledge upon which to build is highly essential, whether one is preparing for a vocation, an avocation, or a life of scholarly pursuits. The college has assembled this heritage and has provided experts to interpret it.

Background can be developed

The difficulties encountered by a student who decided to study sociology provide an excellent example of the need for background in pursuing a course in college. Jane had a vague realization that study of this subject would prepare her for social work, in which she had become interested. Sad to relate, she failed in the first sociology course she entered. Although somewhat discouraged, she determined to discover the cause of her failure and soon realized that she lacked essential prerequisite knowledge of the subject. Her vocabulary was too meager; she could not understand what she read in sociology textbooks. She knew nothing at all about such topics as poverty, charity, immigration, labor, and population trends. She immediately set to work to secure all the experience she could from seeing different types of social living, from listening to discussions of economic and political problems, and from reading books in the field of social service. In this way she built for herself the necessary background and became a competent student of sociology.

As in other human traits, great differences exist in students' individual abilities to enrich their backgrounds of knowledge; but every person, no matter what his general ability level, is capable of profiting by suitable education. We can cultivate our mental resources as a gardener cultivates his flowers. The richer the soil, the more beautiful and hardy the flowers will become. Similarly, in human culture, the richer the environment, the more cultured the individual becomes.

To build background consciously requires discipline; and to be successful, this discipline must be self-imposed. Of great importance to the college student is the assurance that his background can be enriched and strengthened if he is willing to make the necessary effort.

Ways of acquiring background

Rex's chief interest was horses; Jane, on the other hand, was interested in people. Should Rex meet Jane, it is not likely that their conversation would be interesting to each other. Rex's talk about the ranch would bore Jane, and her enthusiasms about people would be of no interest to him. She might label him a "hick," and he in turn would think her "high-hat." This example involves extremely different personalities, but it represents the basic principle that operates in the influences of cultural backgrounds. We think and converse in terms of our acquired culture habits.

However, other personality factors might cause Rex and Jane to become interested in one another. Suppose he fell in love with her, and some of his other traits of personality appealed to her to the extent that she encouraged his attentions. Should they marry, one or the other would need to reconstruct his background. If Rex decided to go to the city for Jane's sake, he would have to

make the adjustment. Could he do it? Of course he could, for he would have one of the strongest motivating forces in the world — the love of a woman, which often has changed the course of history. Rex might even return to college, as much of an ordeal as this would be for him.

So it is with acquiring background in any field. For example, a student who is a fair performer on the piano may develop a desire to compose music or to become a conductor. If the desire is strong enough, he will begin to study the history and theory of music and the lives of great musicians. With this self-discovered need, nothing can stop him. He will acquire background in music.

Similarly, the engineer knows that his necessary background of knowledge lies in the fields of mathematics and the sciences. For him this is no guess — the heritage of engineering has told him so. The medical student will attend lectures and spend endless hours in the biological laboratories and in reading medical literature. Why? To obtain the full benefit of the medical heritage for later use.

When we meet a person who is well read in a specific field, having much information regarding it, we know that to gain this he has made good use of his cultural opportunities. To acquire background in any field of study requires systematic effort. Many of us resemble the little six-year-old who came home after her first day of school and cried because she had not learned to read. From what had been told her, she expected to read as soon as she went to school. But there was no magic curtain to be pulled away from her eyes so that she could read. The acquisition of background, by which the young person becomes adult, is a gradual process and requires self-imposed discipline.

It should be noted that in fields such as art or music, one may desire a background for appreciation of the performances of others. Again, to enjoy pleasant associations with others it is essential that one have a general knowledge of many subjects. Bond, in his book, *Give Yourself Background*, discusses this under the media for self-education, and says:

“The modern world supplies the modern individual with many readily available agencies which he can use to develop himself through his own efforts. Outstanding among these agencies are: newspapers, magazines, books, radio, the motion picture, the theater, concerts, lectures, and personal contacts.” (2)

Outstanding influences on culture are found in motion pictures and the radio. *Fortune Magazine* for February, 1940, says that the “movies . . . have exerted such an influence on the manners, speech, and buying habits of the people that . . . when Clark Gable’s disrobing act in ‘It Happened One Night’ revealed he did not wear an undershirt, so many American males discarded theirs that the undershirt industry was moved to a stern official protest.” The present age has witnessed a steadily growing interest in good music. The movies have contributed to this by using operatic and symphonic numbers to create certain moods. Radio has also participated by presenting much fine music, with adequate explanations of the meanings and moods which composers have sought to convey. Interest in the sciences as well as in history and the arts is stimulated by such outstanding motion pictures as those portraying the lives of Louis Pasteur, Alexander Bell, and Thomas A. Edison. Sometimes we are so influenced by a picture, play, book, or newspaper account that we change

our attitude. This is part of the process of building a basis for constructive thinking, evaluating, and acting.

Bond offers a number of methods of self-discipline to avoid getting into a rut:

“One day a week read a newspaper you do not ordinarily see.

“Read a different magazine every month.

“One day a week read some department of your newspaper which you do not ordinarily read.

“In setting up your reading program, vary your diet; let it contain simultaneously history, fiction, drama, science.

“Listen to unfamiliar radio programs.

“Once a month do something or go some place you do not ordinarily include in your routine.

“Keep a diary — even if you record only the high point and the low point of each day.

“Take a few minutes before going to bed to review the happenings of the day.

“Get into conversation with different types of people.

“Play as much as time allows.” (2)

To be able to take advantage of all the cultural forces in contemporary life one must have initiative and ambition.

The cultural challenge of books. Books constitute the most readily available agency at our command for learning about our cultural heritage. Most of mankind's knowledge is preserved between the covers of books. Thoughtful readers constantly relate their reading to the present day. Education from books tends to become static if emphasis is placed only on the old, on that which is past.

Not so long ago a cultured individual was one who was
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well versed in the literary classics. Today the educated man must have a reasonably wide acquaintance with literature, but he is compelled to realize the limitations imposed by the vastness of our cultural heritage. This demands both selection of what one reads and the thoughtful use of one's time.

The difference between narrow- and broad-mindedness arises from the divergence in backgrounds which results from reading. To the student who reads for background this advice may be given: Read wisely; read understandingly; read with an open mind. Take from each author his best, and add it to your store. The knowledge libraries hold constitutes the full reservoir of our cultural heritage. The principal job of the student is to develop realization of its value.

Vocabulary is essential to both good reading and good speaking. Our knowledge of words and their meanings should increase as we read. Bond, in *Give Yourself Background* (2), has listed a number of books for specific and general reading. Outline books like Wells's *Outline of History*, Clement Wood's *The Outline of Man's Knowledge*, and Hogben's *Mathematics for the Million* are invaluable for general background reading, as well as to increase one's vocabulary.

The importance of conversation. We frequently hear such a remark as, "Mr. Jones is most interesting when he is talking in his own field, but outside of it he is a bore." Or we may hear, "He is a diamond in the rough, even though his lack of social background is constantly in evidence." Each of us has friends whom we like personally but whom we hesitate to introduce to other friends. We like them for what they are; we fear others' judgment of them.

At first meeting, lasting impressions often are made,

frequently by one's conversation. Like other personality traits, the ability to converse varies with the individual, and this is quite noticeable among college students. Those who read selected literature, who attend the theater, who study motion pictures critically, and who have an intelligent interest in music and art, invariably disclose by their conversation and manner of speech their superior cultural backgrounds.

Some critics have said that among Americans conversation is a lost art. Pitkin, in *The Art of Learning*, says:

“Teachers miss a tremendous opportunity when they fail to train the young in the ways of artful conversation. . . .

“Make it your business — and a solemn one, too — to converse at home whenever possible and as long as possible. This precept runs counter to the trend in American life.” (5)

Speech is the basis of social life. Man is a gregarious animal. Meeting in groups for conversation is a stimulus to his social well-being. Christopher Morley stated it aptly when he said: “What a delicate and rare and gracious art is the art of conversation! With what a dexterity and skill the bubble of speech must be maneuvered if mind is to meet and mingle with mind.”

The art of conversation lies in expressing oneself as one thinks. To converse well, one's thoughts must be crystallized. What we say and how we say it both count heavily in the matter of human relations. A wrong choice of words or an improper inflection in the course of a sentence may mean the loss of a friend, or defeat in a business transaction. The ability or inability to use appropriate or tactful language reveals culture and background tellingly.

Another important factor in conversation and in associations with others is the ability to listen. In conversation, moreover, a knowledge of how to balance talking and listening is essential. There is etiquette and sportsmanship in conversation. The person who gets along well with others has learned the rules. One does not shout at or insult his colleagues or opponents in conversational intercourse. A good conversationalist is tolerant and tactful. He has insight, and the ability to place himself in the other person's position. We call this "good manners."

The significance of good manners. Good manners indicate the desire to make others comfortable. A well-mannered person never offends another knowingly. Manners are a definite part of the cultural background, and individuals are judged by their manners. Whether one is naturally well-mannered or has to acquire this trait, a certain self-discipline is required to make it habitual.

Good books, such as *Living with Others*, (3) by Goodrich, *Manners for Millions*, (4) by Hadida, and the time-tested *Etiquette*, (6) by Emily Post, which are to be found in most libraries, cover this field completely. Hadida says:

"There are thousands and thousands of persons who are anxious to do things in the right way. There are other thousands who do not know that there *is* a right way. They are unaware of the fact that it is a simple matter to find books on the subject." (4)

This author points out that the early books in this field did not tell the majority of the people what they most wanted to know. Such information as the proper manner in which to address the President of the United States, or

the etiquette of presenting one's daughter to society, lacks practical application for most of us. The more recent books contain more usable instructions.

Conventions differ from manners. The acquisition of the best in our culture requires contact with other human beings, and in this, good manners are essential. Conventions also are necessary factors in these relationships. It has been said that one may have good manners and yet be ignorant of conventions. Broad knowledge of social conventions and usages, however, is an important aspect in one's background. These are part of our heritage — the result of the customs of the society in which we live.

Conventions are the unwritten laws of social living. They may differ in some respects from what we call manners, which are general modes of social conduct based upon the individual's inward desire to express good will. An example of this difference is found in the remark made by a young woman guest at the home of a college president. She said to him, "I do so enjoy coming to dinner at your house, for I never feel self-conscious when I make mistakes in your presence." The conclusion to be drawn from this remark is not that the president was always conventional, but that his manners were such that his guests felt at ease in his presence.

Background in review

Background is to the cultural level of the human being what a backlog is to a fire on the hearth. The more substantial the log, the brighter and warmer the fire; the more solid the background, the more interesting is the person. Human beings may be equally ambitious, but they do not possess equal ability. No amount of ability has much value unless there is opportunity to use it. If

we speak of opportunity as a result of environment, we can in turn think of environment as a creator of background. The person with lesser ability may largely compensate for this lack by persistence and self-discipline. He may even develop a richer background than that of the individual with greater ability who does not work at self-improvement.

Background comes from taking full advantage of the social heritage. Some of us are born with better opportunities to do this than others. However, the achievement of a culture which is desirable and suitable to the individual is his inalienable right. He can have as much or as little of it as he will strive for. The extent to which a person gains understanding of the larger cultures — that is, those of world-wide significance — and of the cultures within a culture — that is, those of one's own country and community — depends upon his own ability and desire.

Opportunities for acquiring background are not limited to educational institutions. The means for gaining knowledge of our culture and how best to use this background information are available to everyone. An enumeration of these resources includes newspapers, magazines, books, radio, motion pictures, theaters, concerts, lectures, and personal contacts. The college student has an advantage over his non-collegiate brother because an environment of concentrated educational forces is devoted to the growth of his personality. Reading, listening, conversing, and making use of all the rules and manners required in these activities are aids to building background. In short, this is education, and in the way it is accomplished lies the value of human orientation.

Our greatest source of strength lies in the way we use our cultural heritage in present-day situations. It is

transmitted wisdom of the past. This wisdom is embodied in our habits, in our institutions, and in our traditions — the conventional ideas that have been passed on to us by previous generations. Inherited wisdom is said to be the flywheel, the stabilizer, the great conserver of our culture.

The cultural background of an individual is the result of the interrelation and integration of all that makes up his heredity and his environment. To make use of the native endowment, to bring into accord all that one has gained from his acquired culture, is the essence of growth.

SUGGESTED FURTHER READINGS ON THE SUBJECT OF BACKGROUND

1. BENEDICT, RUTH. *Patterns of Culture*. Houghton Mifflin Company, Boston; 1934. Pages 252-253.

This readable and authoritative book of 290 pages is worth owning. The author describes three primitive peoples and compares them with the nature of our society. She discusses "The Individual and the Pattern of Culture" most interestingly.

2. BOND, F. FRASER. *Give Yourself Background*. McGraw-Hill Book Company, Inc., New York; 1937. Pages 17, 205.

Methods of acquiring background are discussed in this book. It tells the reader how to use to advantage books, magazines, motion pictures, the theater, and other sources of information.

3. GOODRICH, LAURENCE B. *Living with Others*. American Book Company, New York; 1939.

This volume is easy to read and is an excellent book in the field of etiquette. It is illustrated interestingly. Although written primarily for senior high school students, college students find it helpful.

Building on Our Cultural Heritage

4. HADIDA, SOPHIE C. *Manners for Millions*. Doubleday, Doran & Co., Inc., New York; 1937. Page viii.

This undoubtedly is one of the best books available in the field of everyday manners, customs, and dress. It is different from other books on the subject of conduct in that it applies to all, rich and poor alike. It is brief and to the point.

5. PITKIN, WALTER B. *The Art of Learning*. McGraw-Hill Book Company, Inc., New York; 1931. Pages 298-299.

This book of 400 pages is written in journalistic style, as the author is a professor of journalism. He calls it the "Textbook of the New Age" and asserts that it "introduces you to the most important, most neglected art in the world." For background reading this popular book on learning is decidedly worth while.

6. POST, EMILY. *Etiquette*. Funk & Wagnalls Company, New York; 1939.

An attempt is made in this revised edition to make this book more practical and to give it wider application. Mrs. Post has added chapters on manners for motorists, modern courtesy, restaurant etiquette, smoking, modern man and girl, and travel by air.

7. WARD, F. E.; BOOTH, E. H.; and MAY, G. J. L. *Earning Our Heritage*. Harcourt, Brace & Co., Inc., New York; 1937. Vol. II, page ix.

This valuable work is in two volumes. Its purpose is orientation in the field of the language arts. The aim is to help college students learn by practice to speak, read, and write intelligently. It contains illustrative selections from literature. This work may be used as an introduction to literature.

8. WARDEN, CARL J. *The Emergence of Human Culture*. The Macmillan Company, New York; 1936. Pages 6, 7-8, 8.

This interestingly written book of 189 pages may well be considered good introductory reading in anthropology. The author, however, calls it comparative psychology.

The Road Ahead

The book is a scientific plea for better understanding of cultural forces. It contains an excellent bibliography.

Other useful books in this field are:

- BENNETT, ARNOLD. *Literary Taste: How to Form It*. Hodder and Stoughton, London; 1930.
- BOAS, F. *Anthropology and Modern Life*. W. W. Norton & Co., Inc., New York; 1928.
- DEWEY, JOHN. *Human Nature and Conduct*. Henry Holt & Co., Inc., New York; 1922.
- MELVIN, A. GORDON. *The New Culture*. Reynal & Hitchcock, Inc., New York; 1937.
- WALLIS, W. D. *Culture and Progress*. McGraw-Hill Book Company, Inc., New York; 1930.
- WIGGAM, ALBERT E. *The Marks of an Educated Man*. Bobbs-Merrill Company, Indianapolis; 1930.
- WISSLER, CLARK. *An Introduction to Social Anthropology*. Henry Holt & Co., Inc., New York; 1929.
- *Man and Culture*. Thomas Y. Crowell Company, New York; 1923.

Chapter

8

PERSONALITY IS ALL OF A PERSON

"That I am 'I' to myself and 'you' to all my readers, who are each of them 'I' to himself, is on contemplation a perturbing circumstance." JAMES HARVEY ROBINSON

WHO has not at some time, in a philosophic mood, asked the question, "Who am I?" Lying on the grass and looking through the trees into the vastness of the sky, or sitting on a beach and gazing out over the broad expanse of the rolling ocean, may arouse thoughts of deep concern regarding this person "I." That I am "I" to myself and "you" to you is an astonishing concept in the study of personality — one which most people take for granted.

This self of ours which is "I" to each of us has been a commonplace in our thinking for so long that we are surprised at the strangeness of "I" when we come face to face with our thoughts about it. Yet to each of us the most interesting subject in the world is ourself. There is nothing so close and so important to us as our own personality. Selfish as this may sound, a moment's reflection will verify its truth. The subject of self is an old, old one. Although Socrates' admonition, "Know thyself," has been handed down through the centuries, it is still the rare person who really knows himself.

The selves of personality

What is this self? Observed facts indicate that each of us has several selves. William James described three of these: (1) the material self, (2) the social self, and (3) the spiritual self. Also, he discussed several schools of thought regarding a fourth, which he called the "pure ego." This concept today is still the subject of much speculation and controversy. It is agreed, however, that the pure ego involves a sense of personal identity. In our discussion the term will not be used significantly, due to lack of adequate definition.

Regarding the first three selves listed, James pointed out:

"(a) The body is the innermost part of *the material Self* in each of us. . . . The clothes come next. . . . Next, our immediate family is a part of ourselves. . . . Our home comes next. . . .

"(b) *A man's Social Self* is the recognition which he gets from his mates. We are not only gregarious animals, liking to be in sight of our fellows, but we have an innate propensity to get ourselves noticed, and noticed favorably, by our kind. . . . Properly speaking, *a man has as many social selves as there are individuals who recognize him* and carry an image of him in their mind. . . .

"(c) By the Spiritual Self, so far as it belongs to the Empirical Me, I mean a man's inner or subjective being, his psychic faculties or dispositions, taken concretely; not the bare principle of personal Unity, or 'pure' Ego. . . . We take a purer self-satisfaction when we think of our ability to argue and discriminate, of our moral sensibility and conscience, of our indomitable will, than when we survey any of our other possessions." (5)

Personality Is All of a Person

Let us look at these three selves:

(1) *The material self.* The body and the way we dress it are important. A woman may have a short or long nose or an oddly shaped mouth and still be able to make an attractive appearance with proper hairdress and cosmetics.

Frequently a peculiar body build adversely affects one's personality. For example, a physical disfigurement may cause over-sensitiveness to which one may react either by withdrawing from normal associations or by defiant aggressiveness. Or financial inability to feed, clothe, and house our body as well as the "Joneses" do theirs may cause feelings of frustration which will warp our personality. On the other hand, consciousness of an attractive, well-dressed body tends to give one self-confidence and feelings of good will toward the world, although it might possibly lead to vanity and feelings of false superiority.

Our body and the way we handle it, our appetites and instincts, our love of adornment, our love of home, our vanity or modesty, our pride of wealth and fear of poverty, our acquisitiveness and constructiveness — all these constitute our material self.

(2) *The social self.* In every land in the world the human being is concerned about what others think of him. Robert Burns said,

"O wad some Pow'r the giftie gie us
To see oursels as others see us!"

We cannot be certain what others see in us or what they think about us. We are responsible in a measure, however, for the opinions they form about us. In this respect our social self shapes our destiny.

A college man was losing his friends and did not understand why. When asked if he really would like to know the cause and whether he would face the facts if they could be ascertained, he replied, "I certainly would try to face them, because I never have felt so alone in the world." Some of his close associates, in his absence, frankly stated the difficulty. They said:

"Bob is a fine-looking fellow with a splendid physique. He is an excellent student and an exceptional athlete, but — he is so conceited that it is almost nauseating to hear him talk about himself! He is so self-centered that he can't bear to hear of anyone else's success. He belittles favorable comment made by his classmates about anyone else. He doesn't take much time even for that, for he just must talk about himself. He's simply impossible!"

When this appraisal was relayed to Bob, he was surprised and hurt, but upon reflection he conceded that it might be a true one. He recalled that as a child he had felt a great need to excel, because he had an older brother who was "the apple of his father's eye." From this it was easy to see what had resulted. He praised himself and belittled his associates in an effort to build up self-confidence and (or so he thought) raise himself in the estimation of others. He had some tendency toward dominance and so did an effective job of self-display. From this habit came the evidences of extreme conceit which so annoyed his college classmates.

In his attempt to revise his personality, Bob performed in athletics even more enthusiastically than before, but refrained from boasting about his prowess. He continued to maintain his high scholarship, but without comment. He coöperated, quietly and sincerely, with various committees for social affairs. He made a point of noticing

others and complimenting them on their achievements. He became a socially acceptable individual, able to make and keep friends. The key to his social adjustment lay almost wholly in his ability to face facts with the will to change.

There can be no greater punishment to the social self than to be left alone or ostracized from the society of others. To be loved, to be wanted, is a craving of the human heart. In satisfying this burning desire for love and recognition, men seek honors and distinctions, or become the servants of social ambitions. Pride of family and various forms of snobbery have this same motivation, and shame or abasement may result if its aims are not achieved.

(3) *The spiritual self.* The spiritual self, as James points out, is largely an abstract way of dealing with consciousness. It involves our intellectual, moral, and religious aspirations and our feelings of moral and mental superiority or inferiority. Although the content and method of our thinking obviously govern much of our action, the ways in which we think belong more to the spiritual self than do the ways we walk, talk, and act.

Our spiritual self represents that part of the personality which shows refinement of thought and feeling. It is our intellectual side as opposed to the material. It deals with moral issues. What is right and what is wrong involve spiritual concepts. James does not confine the term "spiritual self" to the religious interpretation of right and wrong. It is the self "abandoning the outward-looking point of view, and . . . having become able to think of subjectivity as such, *to think ourselves as thinkers.*" (5)

In other words, the spiritual self is the ability to think through problems having to do with the other selves.

This is acquired through a process of growth and development.

Totality in personality

The first principle to recognize in regard to our personality is that it is our total self. When we function, all of our selves are in action. Alexis Carrel says in *Man the Unknown*, "Man thinks, invents, loves, suffers, admires, and prays with his brain and all his organs." (3) Every thought and every act does something to us. Every situation we meet and every decision we make regarding it requires a personality adjustment. Everything a man does is with the full coöperation of "his brain and all his organs."

The way the individual acts or reacts is to a large extent the result of how he grew up. Heredity and environment both have contributed to the person. The nervous system and the organs of the body are influenced by heredity and consequently play a definite part in a man's responses to his environment. They may constitute a strong inheritance, but the way they function is dependent to a large extent upon training. When an individual's abilities function harmoniously as a unified whole in the environment in which he finds himself, he may be regarded as a balanced personality.

Scientists in the field of personality study agree on these two very important concepts: (1) Personality is the whole person; and (2) personality has to do with the harmonious integration of all man's abilities and functions. Personality, then, describes the kind of person one is. It is this *I*, this *Me*, this *You*, in all ramifications and moods.

Classification of personality traits. No two personalities are alike. In the total personality we can observe individual traits. These traits are distinguishing character-

istics which make the individual a distinctive personality. They may be misleading when considered separately, but they are remarkably illuminating when put together in describing a person.

In his *Social Psychology*, Floyd Allport defines "traits" as "groups of characteristic reactions based upon native constitution and systems of habit." (1) He has suggested a simple classification of traits of personality, not necessarily the best or the only one, but one that is well stated and comprehensive. They are (1) intelligence, (2) motility, (3) temperament, (4) self-expression, and (5) sociality. To these we shall add, or suggest, a sixth — physique.

(1) *Intelligence* may be described as reasoning power. It is the ability to solve problems (not necessarily mathematical) and to meet new situations. Creativeness and the capacity for making sound judgments also are involved. Lewis M. Terman has defined intelligence aptly as "the ability to segregate the relevant from the irrelevant."

Intelligence is one of the few traits of personality that so far are subject to some degree of quantitative standard of measurement. The degree to which a person manifests it definitely qualifies his personality. Other traits are developed and amplified by the way intelligence is applied.

(2) *Motility* means the method of attack the person uses in various situations, and involves such characteristics as impulsiveness, controllability, and steadiness. Some individuals are always bustling, talking, and rushing through their duties and pleasures at a great rate. Others are slow-moving and methodical. Some persons have great will power and persistence in the face of obstacles and discomforts.

Observe the fine motor coördination displayed by a graceful baseball pitcher in delivering the ball. Note

how pleasant it is to watch a good golfer as he swings on the ball with a perfect stance. These are good examples of motility. If we refer methods of attack in both mental and physical situations to style and grace in manner of action, we see motility as a rather large and inclusive category of the traits of personality which are of great importance in dealing with other people.

(3) *Temperament* involves emotional reactions. Most people have characteristic moods. Under certain circumstances we may ask about a person, "What part do emotions play in his daily life? Does he display occasional uncontrollable fits of depression or exhilaration?" In a different situation we may inquire, "Is his daily work enlivened and energized by imaginative feeling, or is he humdrum and unemotional? How does he react to success and failure, praise and blame? What are his likes and dislikes?" and so on. In observing temperamental traits in others, we note that some persons are habitually gloomy, while others are cheerful; some are suspicious, timid, embarrassed, or over-sensitive.

(4) *Self-expression* usually is seen as the ability to put one's thoughts and desires into words. It also involves the ability to put these thoughts and desires into action — what we may call "drive." Demosthenes had a tremendous drive to become the world's greatest orator; Columbus, for circumnavigating the globe; Abraham Lincoln, to preserve the Union. Some of the more common motivating forces are ambitions for social influence, wealth, power, literary eminence, or prestige in the field of science or art, for success in politics, and the desire to realize one's ideals in marriage and family life or to improve the world through charity, reform, and religion. Drives rarely run along smoothly; usually they encounter obstacles and difficulties. People differ in their reactions

to obstacles. Some individuals exchange their needs of self-expression for what are known as "compensations"—that is, excuses which are not realized to be excuses. For others, obstacles are a source of greater effort and eagerness to grow and improve.

Another phase of self-expression is our reaction to other persons. Some individuals enjoy being with and working with other people. These are called "extroverts." Others prefer to be alone and to occupy themselves with reading and thinking. These are known as "introverts." Of course, these are not mutually exclusive traits; most of us are both introverted and extroverted, tending, however, toward one or the other. Both are desirable qualities in moderation, if adjusted to the particular personality.

To consider yet another aspect of self-expression, some persons are submissive and usually permit others to take the lead. In contrast, aggressive or dominant persons usually desire to be leaders. Here, too, the strong personality displays a nice balance between leadership and the willingness to follow.

(5) *Sociality*, or sociability, may be defined as the ability not only to make friends but to feel at ease in any company. We might also call this poise. Are we good mixers? Do we have tact? Do we grasp situations easily if we are thrown into a group? Are we intelligently responsive to facial expressions and tones of voice? Do we tend to be unselfish? Or selfish? Do we take part in social gatherings? Such questions throw light upon our sociality.

(6) It is difficult to see where the traits of size, strength, health, and beauty would appear under the five classes proposed by Allport. L. F. Shaffer, in *The Psychology of Adjustment*, suggests, "To these categories might be added *physique*." This proposal seems valid.

The necessity for adding this classification suggests that any division into categories is at best only suggestive. Critical psychologists may say that such an attempt to simplify a complicated situation may lead to erroneous thinking. But in trying to get the subject of personality to a place where we can understand it, we need some device. The enumeration of these six classifications of traits gives us a picture of the component parts of a total personality.

The integration of personality traits. There is necessarily great overlapping in any classification of personality traits because our characteristics are so closely coördinated and interwoven that they scarcely can be separated. All our traits working together make the total personality.

The fact that a person may be almost completely lacking in some desirable traits does not necessarily mean that he has a poor personality. For example, normal intelligence or even intelligence a little below the average may be balanced by other traits. All of us are stronger and more mature in some ways than in others. Even a well-balanced and adequate personality may be weak in some ways. The effectiveness of the whole is what counts.

An individual who aspires to a life's activity which requires unusual scholarship will, of course, need an adequate native endowment of intelligence. He should have the trait of persistence, but he does not require grace in movement. It would be essential that he have suitable traits of temperament and self-expression. If he is handicapped by over-sensitiveness, he must overcome it by his persistence. He may be more introverted than is generally desirable, or he may be unsociable and unattractive physically, and yet have a desirable personality for his purpose. On the other hand, a person interested in salesmanship would need quite a different combination of traits.

It becomes clear, then, that there is no ideal personality. What each individual needs is one that will function for his own happiness. Therefore, it is useless to imitate what we consider a perfect personality, for to do so may throw our own balance off. We must be what we are, and we must perfect or mold the traits we now have into the desirable whole that we need in order to achieve our aim or ambition. We all have every opportunity to grow toward our own concept of perfection.

Personality and growth

Personality is the result of growth. The following is a fundamental law in personality development: *What the personality is to be, it is now and always has been becoming.*

Personality growth, like all growth in nature, should be gradual. Forced growth violates nature's laws. Personalities are not formed overnight. The true self is a natural self and it should grow in a natural manner.

When a child leaves home to go first to kindergarten and then to elementary school, he undergoes social changes. When he reaches the age of pubescence, physiological changes take place. Interest in the opposite sex resulting from the biological drive to mate causes us to behave in ways which seem peculiar to those who have forgotten their own experiences. Students cannot explain, for example, why they go on a "date" when they should be studying for an important test.

From babyhood to adult life there is a continuous process of growth and change. We meet new people; we adjust to new tasks; we break away from past ways of doing things; our early beliefs are forced to change in the light of new information. These constitute the "how" of our personality changes. The growing-up process constitutes the "when." When we stop growing and

changing, we die. As Samuel Butler, in *The Way of All Flesh*, said:

“All our lives long, every day and every hour, we are engaged in the process of accommodating our changed and unchanged selves to changed and unchanged surroundings; living, in fact, is nothing else than this process of accommodation; when we fail in it a little we are stupid, when we fail flagrantly we are mad, when we suspend it temporarily we sleep, when we give up the attempt altogether we die. . . . A life will be successful or not, according as the power of accommodation is equal to or unequal to the strain of fusing and adjusting internal and external changes.” (2)

The principal reason for warped personalities is failure to observe the laws of natural growth. Over-concern for the child often results in parents' making his decisions for him. This protection given on occasions when the child should be learning to make decisions for himself is a misplaced kindness and often results in weakening rather than in strengthening the growing personality. The youth who has not learned to “stand on his own two feet” faces the necessity of speedily doing so in college. Under such circumstances discouragement over mistakes in judgment is to be expected. There is, however, ample evidence that when the desire to do so is real, growth in ability to make adjustments can be speeded, within limits, if the individual gains insight regarding the various traits of personality and how they grow into a total personality.

The significance of habit in personality growth. Day by day the personality is shaping itself. Habits formed today become part of the personality tomorrow. Should a person be so unfortunate as to be over-indulged by his parents through misguided affection when he is a child,

the habits he acquires then will appear in his personality in the way he acts and responds later.

Referring to the part habit plays, William James says:

“When we look at living creatures from an outward point of view, one of the first things that strike us is that they are bundles of habits. In wild animals, the usual round of daily behavior seems a necessity implanted at birth; in animals domesticated, and especially in man, it seems, to a great extent, to be the result of education. The habits to which there is an innate tendency are called instincts; some of those due to education would by most persons be called acts of reason. It thus appears that habit covers a very large part of life. . . .

“Habit is thus the enormous flywheel of society, its most precious conservative agent.” (5)

The ways we walk, talk, feel, and act are integral parts of our personality. Since these traits of ours are habitual, it is evident that we shape our personality by the habits we form.

Adjusting to environment. Where we are governs how we behave. An individual in surroundings that are thoroughly familiar to him may show traits of behavior so different from those he displays in a strange place that one would scarcely recognize him as the same person. Familiarity with surrounding conditions causes a person to act with confidence and naturalness. Note the confidence an experienced swimmer has when he enters the water as compared with that of the novice. Observe the sophomore returning to college in contrast to the freshman who is there for the first time. Strangeness of a situation brings uncertainties to the fore and requires cautious exploration. In unfamiliar situations our whole person

sometimes acts strangely, and the individual may give an impression that is the opposite of the one he intends.

Everyone must adapt himself to continuous changes in his environment. As individuals we vary greatly in ability to make these adaptations. The person who is shy envies the one who mingles with other people with ease. Some individuals are aggressive and face a new situation with force that overawes. How much of these two extremes of personality is born in us and how much we acquire, no one really knows. Alexis Carrel points out that man's "mode of reaction to his social surroundings depends on his specific constitution. Some people become accommodated to this world by conquering it. Others by escaping from it. Still others refuse to accept its rules." (3) The person who fights for what he wants is said to possess traits of aggressiveness and dominance. Those who use methods of escape are not necessarily submissive by nature but may not like to fight. The attitude of most individuals toward conflict lies somewhere between the two extremes.

There are times when an individual can adjust his environment to himself — as, for example, a student may arrange his room so he can study effectively in it, or an employer may hire only people who will coöperate with him. For the most part, however, the individual must adjust himself to his environment. He can have his house air-conditioned to change nature's air currents, but the total physical and social environment is something the individual does not change much. Biologically, every living organism must adapt itself to its environment if it is to survive. We act intuitively in accordance with the law of the "survival of the fittest."

Judging values. During the various stages of growing up every person, consciously or unconsciously, is concerned

about the kind of individual he now is and about what he will be at some time in the future. Those things a person considers important in life have much to do with the way he lives and they tend to shape his attitude toward life.

Very early in life the human being begins to rate himself as inferior or superior to people he knows. All through lower school and high school young persons tend to judge their own traits of personality in relation to those of their contemporaries. Most persons place a certain value on being like someone else. As an individual strives to emulate another, he adopts a certain system of values. It is impossible to consider a system of values or purposes apart from a personality. Each of us tends to idealize certain others and if the ones we select as models value sports, politics, art, or the company of the opposite sex, then these become the things we value in life. The growing personality develops along the line of his concept of values and the nature of his purposes.

To illustrate the point of placing values, take the young man who is slight in stature. In school he envies the strong, well-built athlete. He places tremendous values on the position of the athlete in his society. He tries to compete athletically but is never quite able to make the team. As he grows older, in spite of physical shortcomings he continues to strive for superiority in this, for him, hopelessly impossible activity. Perhaps, since he is a bright young fellow, he becomes a walking encyclopedia of sports. He thereby achieves part of his purpose by being able to associate with athletes because, in a way, he is interesting to them. Although he enjoys these associations, he may gradually develop a feeling of intellectual superiority and in time begin to "wisecrack," or to make statements which the athletes find tiresome. In that case he again loses

out on his purpose, which by now is to associate with the members of the teams even though he cannot participate in their sports.

It is obvious that this man has misplaced his values in relation to the development of his personality. He has assumed a rôle in which he is certain to be inferior to his chosen associates. If he had developed a craving for art, music, or writing, his strong trait of intellectual ability could function without exposing his physical weakness. Had he been so fortunate as to find a personality idol who did one or more of these things well, he could have set up an entirely different set of values in which his need for superiority would be satisfied. He would then have readily developed a wholesome personality.

For similar reasons, a girl who has inherited unsuitable physical or mental qualities should not place her chief value in life on the stage as a career. She may have some personal peculiarity that enables her to "star" in a part in one production, but stage success calls for adaptability to many parts. The girl who is short in stature and small in frame should not capitalize too long on being cute and childish, nor should the tall, rawboned girl try to be kittenish.

To be able to evaluate the things one wants to do in life in terms of one's own capabilities is extremely desirable in developing a wholesome personality. The term "inferiority complex" has become a universal byword for the feeling of inadequacy which often develops when an individual fails to recognize his own limitations. Placing great value on things to which one's personality is not adapted results in conflict, frustration, and feelings of insecurity. To attach intelligent values to the things one needs to do for complete personal satisfaction is a major achievement in the art of living, for the total self or

personality develops most harmoniously and effectively around those things in life that a person can do best.

Faults in personality cause trouble

Our whole personality — the *all* of us — must develop as a unit or we will suffer an unbalanced personality. If our traits of sociality develop before our self-expression or our temperament, we are likely to have experiences of “ups and downs” in our feelings. These experiences are all to the good if we realize what causes them and work constantly for balance of our personality traits.

Studies in industry indicate that dismissal of individuals from their positions is due more often to personal difficulties than to incompetence. The Bureau of Vocational Guidance at Harvard University examined some 4000 cases for causes of discharge. It found that 34.2 per cent were discharged for “lack of skill and technical knowledge” and 65.8 per cent because of “social misunderstanding.” To possess a personality that can get along with supervisors and fellow workers is important for success on the job. Some of the major employer-labor disputes arise from personality differences and lack of adjustment rather than from economic reasons.

Temper tantrums represent another aspect of personality. If we wish to change such a highly undesirable form of personal expression, either in ourselves or in others, we should ask, “What are the causes of the anger?” and “Are they removable?” Sometimes the cause is physical, such as decayed teeth or general ill-health. Often it is a home conflict, worry about finances, or a misunderstanding of some sort. It is not uncommon that a history of uncontrolled temper in early childhood is to be found in individuals who indulge in fits of anger. Parents would regard

bad temper in their children more seriously if they realized some of the later vocational handicaps involved.

Personality conflicts. When an individual is adjusted to his environment so that the divergent forces within him function in coöperation with the social forces outside his being, his is regarded as being a well-adjusted personality. Conflicts cause the upsetting of personal balance. Indecision and inability to resolve conflicts result in neurotic behavior.

Of the potential personalities in each of us, one is promoted and developed more than the others. In other words, we adopt a rôle and try to play the part consistently. In childhood and adolescence we play many different rôles, changing as we grow. Students need only to refer to Booth Tarkington's *Seventeen* to recall the variety of parts in which they have cast themselves during their lives.

Our concept of values as influenced by our environment is a major factor in our choice of rôle. Also, as Edwin R. Guthrie points out in *The Psychology of Human Conflict* (4), the success of our rôle is dependent upon its acceptance by others. For these reasons the growing person normally advances from rôle to rôle until he finds one which is acceptable both to society and to his own capabilities and developing concept of values. However, it is not uncommon for people to go through life playing parts based upon distorted values. Many persons suffer conflict and nervous breakdown because of their failure to live up to the personality rôles they adopt. Such individuals are maladjusted.

The part we play has many needs that are at variance with those of our other potential selves, or the other rôles we could play. But the potential and partially suppressed personality factors continue to make demands upon the

person. James recognized these conflicting potentialities in the following statement:

“Not that I would not, if I could, be both handsome and fat and well dressed, and a great athlete, and make a million a year, be a wit, a *bon-vivant*, and a lady-killer, as well as a philosopher; a philanthropist, statesman, warrior, and African explorer, as well as a ‘tone-poet’ and saint. But the thing is simply impossible. The millionaire’s work would run counter to the saint’s; the *bon-vivant* and the philanthropist would trip each other up; the philosopher and the lady-killer could not well keep house in the same tenement of clay. Such different characters may conceivably at the outset of life be alike *possible* to a man. But to make any one of them actual, the rest must more or less be suppressed.” (5)

The way we resolve conflicts caused by our innate abilities and social desires has much to do with the directional growth of our personality. It is for this reason that there is a recognized need for guidance during the formative years of the individual.

As an example of several phases of personality conflict, take the love affair of an ambitious young man. He believes himself to be a man of integrity, intelligence, and great drive. He is in love with an attractive girl of fine character who would, as his marriage partner, work with him toward his goals of vocational success and personal happiness, but the struggle for both of them would be long and hard. He also has among his acquaintances a girl who could provide a short cut to achievement by providing financial and social advantages, and who apparently is attracted to him. He thinks he has the confidence to follow his own honest desires. Nevertheless, the atten-

tions of the young lady who, in the eyes of the world, has the more to offer him are flattering to his vanity. The prospect of rapid recognition, which he believes would be made possible with extra advantages, appeals to both his vanity and his ambition. Thoughts of material comforts also are attractive. As he thinks of these advantages, he may develop fears that he cannot succeed without them. He therefore is attracted to this girl, although he may not realize that the attraction is based on his vanity and selfishness.

When he must make a choice between the two girls, he is in a quandary. What does he want most — quick success, material comforts without strife and struggle, or a sense of achievement and satisfaction based on his own abilities and the companionship of a devoted working partner? He may rationalize by saying that in either case marital happiness is a gamble, even though he knows that one attraction is superficial and the other deep.

If he chooses the girl he loves, he strengthens the person he thinks he is. If he makes the other choice, he can pretend to remain in the same rôle but he has weakened his portrayal of the character and is subject to greater conflict, indecision, and feelings of inferiority than would be the case had he played the rôle consistently. Perhaps he eventually would be so weakened that some other self would dominate his thoughts and actions.

It would be equally possible for a young man to allow his self-centeredness to prevent his enjoying the companionship of the girl he loves because she will contribute as much to the marriage partnership as he does. In such a case of distorted values, feelings of inferiority have led him to adopt the egocentric rôle of an all-powerful personality whose superiority must be acknowledged and upheld.

Robert Louis Stevenson's story of Dr. Jekyll and Mr. Hyde illustrates a parallel case — that of an individual who assumed two extremely different rôles. Each concept fought for dominance and control of the person. Obviously, the author's portrayal was one of extreme abnormality, yet we all know people who are quite different persons at different times. In fact, we all do strange things occasionally which we cannot fully understand in ourselves, to say nothing of expecting our friends to do so. We can clarify such inconsistencies in our nature by thinking of ourselves as being capable of playing several different rôles. Each decision in favor of the person we think we are strengthens our portrayal of that rôle, and each succeeding decision is more nearly in character and involves less and less conflict. On the other hand, the more indecisive we are, the more contradictory needs we give way to, the weaker we become in playing the rôle we consider the real "I."

Frustration leads to aggression. Everyone knows that if a child is blocked by an obstruction, he will show anger and will struggle to get past it. To take something away from him will cause him to fight to get it back. In modified and more subtle form, adults tend to behave in the same manner. That a person will become aggressive when he is frustrated can be regarded as a law of behavior. It frequently happens that when a personality behaves peculiarly, the cause is a frustrated situation which came into existence some time before. Morgan gives the following illustration of adult aggressive behavior due to cumulative frustrations:

"Suppose we get up in the morning with the decision that, no matter what happens during this day, we will be sweet-tempered. In spite of our determination things may go wrong. We may

stub our toe, lose our collar button, cut ourselves while shaving, be unable to find the styptic to stop the bleeding, get to breakfast late and discover that the toast is burned and the coffee cold, but through all this we keep cool and even-tempered. Then some trivial thing occurs and we unexpectedly have a violent outburst. Those around us cannot understand why we are so irritable. If they knew all the facts, the repressed anger impulses that have at last gained an outlet, they would not be so surprised." (6)

It may be an immediate or a delayed action, it may be directed at the primary cause of frustration or at something quite foreign to the real cause, but just as surely as "What goes up must come down," a person will find an outlet for his anger if he is frustrated or blocked. The direction his aggression takes is what affects his personality. It may be made to work for him if he diverts the energy generated by anger into constructive channels, or it may make inroads on the personality he thinks he is, if he allows himself to respond in an unworthy fashion.

The individual going from his business to his home, or from home to business, carries his personality with him, and if he has been frustrated in one, he may bring to the other his bitterness, trouble, and irritation. Many of us can recall how the atmosphere of the household was governed by the frame of mind in which father arrived home in the evening. If he was happy, we responded likewise, but if he was cross, the evening meal proceeded in silence or quarreling began. By the same token, happy conditions are just as easily transferred from home to business and vice versa. The value of a person in any organization is enhanced by a happy home life. The wife and mother who cares for the home properly and does not

allow frustrated situations to affect her attitude toward her family is doing more than usually is appreciated to assist her husband and children in making a success of their lives.

Difficulty of judging another's personality

Alexander Pope wrote:

"'Tis education forms the common mind:
Just as the twig is bent the tree's inclined."

The growth of a tree and the growth of a personality are analogous. When we see a tree, what is it that means "tree" to us? Is it the trunk, the branches, the leaves, the unseen roots? Or does the whole tree enter our consciousness at once? When we meet a person for the first time, what makes him or her a person to us? Is it physical appearance — the color of the skin, hair, and eyes, or other physical traits?

It is a physical impossibility to see the whole tree, but we do see its component parts and we form our image of that tree accordingly. Further observation brings out many things we do not notice at first glance. A tree which is well formed, shapely, and healthy gives evidence that its roots are sound even though we cannot see them. Likewise, we cannot see the whole person, but in spite of this we are prone to form quick judgments regarding his personality. To single out any one trait and to judge the whole personality by it is a common practice, but it is obviously an unreliable procedure. The worth of many an individual is not fully recognized because those closest to him fail to consider his total personality. As Norman Fenton has observed in *Self-Direction and Adjustment*, it takes courage to accept and disregard bad traits in others. For example, an individual may be slow to make decisions, and if we are associated with him in an

enterprise this is very annoying. A good trait of his, such as dependability, may be quite overshadowed by this poor one. The need is to enumerate his good traits. We can then treat him in the way we should like to have him treat us under the same conditions, aware always that we have traits that must annoy him if he will permit them to do so.

When we meet an individual, he becomes a personality to us at once because we relate his appearance or his conduct to that of other people. We judge him by the standards we have built up regarding persons we know and the experiences we have had with them. The ability to judge a personality accurately comes only with age, maturity, and a goodly amount of experience.

Personality development need not be accidental

Broadly speaking, any capacity or lack of capacity which we have is part of our personality. Some of us seem to learn more rapidly or easily than others; some of us have certain physiological traits which cause us to give way to emotion more quickly than others. These are parts of our personality. There is growing evidence that such factors can be changed or modified.

Psychology has advanced from the study of the sense organs and human abnormalities to appraisals of normal behavior. The study of the total human being, physically and mentally, has been slow in developing, but scientists in both medicine and psychology are now making great strides in finding out what makes man behave as he does. They are learning the ways in which the personality can be "intentionally transformed." If the personality a man is born with does not fit the pattern of his social environment, how can it be remade, is the great question.

As we look back over our life, most of our personality seems to have developed without any real effort on our

part. The ability to walk and to talk, for example, seems, like Topsy, to have "just growed." But if we could recall the difficulties we had in learning to walk and to talk, we should realize that our several selves show the result of hard work on our part in responding to our environment. We are and always have been at work building our personality, and the job is not yet completed. In the past the direction in which this effort has led us has been largely accidental, but it need no longer be subject to accident and chance. Those individuals who are willing to study themselves and to make use of scientific findings can now learn to understand and manage their own lives. It follows naturally that they also will be better able to understand other personalities. However, one should discriminate when reading in this field, because many books and articles contain statements which lack facts to support them. Much popular literature deals freely with various traits of personality, often in a superficial manner.

Essentials for directing personality change. Mere knowledge about the selves in personality, about the traits that make up the total self, and about the causes of difficulties, does not produce the force that directs personality changes. To know about our traits and how they classify in regard to intelligence, motility, temperament, self-expression, sociality, or physique, is important. To know how to improve any specific trait is even more important. But the desire for improvement, transformed into the will to improve, is the real and essential force.

With maturity the behavior pattern tends to become set, and the older we grow the more difficult it is to change. Change is possible, however, whenever the desire is strong enough.

The key to changing an individual in any way is habit. Some habits improve personality and others thwart it.

We all have certain ways of doing things which we would like to change or modify. The accepted method of changing an undesirable habit such as excessive smoking, drinking, or eating is to substitute something for the established habit. To break the habit of smoking, for example, one should keep mints or gum on hand. Eating slowly and carrying on conversation at the table constitute a way to avoid over-eating. Those who rely on alcohol for a "lift" can find substitutes in the pleasant feelings that result from work, pleasant companionship, or cultivation of good mental health. No one should become discouraged by apparent failure when trying to break a habit, because modern experimentation has demonstrated that in spite of occasional relapses persistence will win out as the new habit is more firmly substituted and continued.

Measuring personality

Work in the field of measuring personality has not yet progressed far. Early writers attempted to classify personalities into types such as "sanguine," described as an active and quick temperament, and "phlegmatic," characterized as slow. Our newer psychology of the individual views with skepticism efforts to group individuals into such classifications, although there are some personalities which appear to be definite types. For instance, the Dr. Jekyll and Mr. Hyde sort of thing may be described as "schizoid" — that is, a dual or split personality. In considering a normal individual, however, we must bear in mind that any personality is made up of all its traits. To name any dominating trait as the whole personality greatly restricts our understanding of the person.

We must exercise caution also in stating specific meanings for specific traits. A trait means nothing except in relation to a total personality.

There are several tests now available that one can use for self-evaluation. If a personality test is offered, it should be taken for the interest there is in it, and without forebodings or fears. Such tests, however, are only a starting point for discussion. They are still in the experimental stage and are in no sense to be compared with the thermometer that the nurse uses to record temperatures. They do, however, contribute to our knowledge of self and they should be used.

One of these tests may indicate, let us say, that an individual tends to be (1) self-sufficient, (2) introverted (inclined to seclude himself or to act without seeking advice), and (3) fairly submissive (easily led or dominated). It may be that after discussion with one who has made a study of this particular test the person tested will find this showing to be about correct. Perhaps the student does tend to go off alone to settle his problems without seeking the advice of others. Considering his other traits, this may be best for him. Being low on the dominance-submission scale indicates that he can be dominated easily by another personality. That does no harm if he is led by the right person; it is disastrous if he is dominated by the wrong person. The general analysis in this case would be that the individual has a tendency toward a balanced personality.

When the observed data in a test approach the extreme ends of the scales, care in interpretation is imperative. For example, George was disturbed over the fact that he scored extremely high in the trait of introversion. The instructions stated that in such a case the individual should consult a psychiatrist (physician for nervous and mental diseases). In conference with the trained examiner, however, it was discovered that George suffered from fears which made him shy. When he learned what those fears

were, he began immediately to make an adjustment. The test registered other traits which required no attention. George took the test as an interested person. Although he was frightened at first, the results proved to be the starting point for the development of a desirable personality.

The great danger in personality tests lies in the fact that too much is expected of them by the average lay person, be he teacher or student. One must not expect a single test to "tell all." Only a competent psychiatrist or psychologist can make a proper psychoanalysis, and for this a long, careful, and expensive procedure must be undertaken.

We realize, then, that there is no such thing as a "good" or a "bad" personality. The best measure of the effectiveness of one's personality is: Am I happy? Should I be unhappy, I may be able to help myself by learning which traits are causing this reaction to life's situations and by attempting to change them.

Balanced personality is the goal

Understanding how traits are balanced to make up a desirable personality may mean the difference between a happy and an unhappy life. We do want to be happy. We want people to like us because we are happiest when we have friends. Good friends believe in us and appreciate what we do. It is an achievement, also, to know how to like people in spite of their individual faults.

We are all different because we are all individuals. No two of us are alike; therefore we cannot say what is the perfect personality. We can describe a desirable personality as one that works well for the individual possessing it.

We know, now that we are in college, that our general ability is satisfactory. We must know ourselves, however, in order to overcome our limitations. To achieve our desired goals we must balance the traits we possess.

SUGGESTED FURTHER READINGS IN THE FIELD OF
PERSONALITY

1. ALLPORT, FLOYD HENRY. *Social Psychology*. Houghton Mifflin Company, Boston; 1924. Page 102.

This book of 453 pages is a recognized standard textbook on social psychology. Chapter V, "Personality — The Social Man," offers an outstanding analysis of personality. Our discussion of the classification of personality traits comes largely from Floyd Allport's presentation.

2. BUTLER, SAMUEL. *The Way of All Flesh*. E. P. Dutton & Co., Inc., New York; 1916. Pages 343-344.

In this 463-page book, a brilliant satirical novel written in the '80's, we find an unusual character and personality study. William Lyon Phelps says in his Introduction, "It is a wonderful treatise on how *not* to bring up children." The story itself is gripping, and it probably is more understandable and enjoyable to the present-day reader than it was to the people of the author's time.

3. CARREL, ALEXIS. *Man the Unknown*. Harper & Brothers, New York; 1935. Pages 144, 220.

The author, in this 345-page volume, has humanized a great body of scientific information regarding the inner workings of man. He writes crisply, clearly, and pleasantly. The material is easy to grasp and is delightfully informative.

4. GUTHRIE, EDWIN R. *The Psychology of Human Conflict*. Harper & Brothers, New York; 1938. Page 348.

In this interesting book of 407 pages the basic aspects of human nature are discussed. The author presents a simple and lucid description of the ways in which people adjust themselves to everyday situations. This explanation is physiological and objective rather than mystical and dramatic.

5. JAMES, WILLIAM. *The Principles of Psychology*. Henry Holt & Co., Inc., New York; 1890. Vol. I, pages 292-330, 296, 104-121, 309-310.

This two-volume set by James constitutes a classic in the field of psychology, provides "backbone" information for teachers, and is interesting and profitable reading for college students. It has literary as well as scientific value. This writing may be old, but it certainly is not old-fashioned. (See also annotation at end of Chapter 6 (page 146), relating to the chapter on "Habit.")

6. MORGAN, JOHN J. B. *The Psychology of Abnormal People*. Longmans, Green & Co., New York; 1940. Pages 245-246.

In this revised edition, comprising 613 pages, Morgan gives proper weight to all the significant recent research in the field of abnormal psychology. This book will aid the reader in understanding the more common weaknesses in human nature. It is clearly written and easy to read.

Other useful books in this field are:

- FISHBEIN, MORRIS, and WHITE, WILLIAM ALLEN (Editors). *Why Men Fail*. D. Appleton-Century Company, Inc., New York; 1936.

- LOCKHART, EARL G. *Improving Your Personality*. Walton Publishing Company, Chicago; 1939.

- RICHMOND, WINIFRED V. *Personality, Its Development and Hygiene*. Farrar & Rinehart, Inc., New York; 1937.

- SEABURY, DAVID. *What Makes Us Seem So Queer?* McGraw-Hill Book Company, Inc., New York; 1934.

- SHAFFER, L. F. *The Psychology of Adjustment*. Houghton Mifflin Company, Boston; 1936.

- THORPE, LOUIS P. *Personality and Life*. Longmans, Green & Co., New York; 1941.

- WHEATLEY, WILLIAM A., and MALLORY, ROYCE R. *Building Character and Personality*. Ginn & Co., Boston; 1936.

- YOUNG, KIMBALL. *Personality, and Problems of Adjustment*. F. S. Crofts & Co., New York; 1940.

Chapter

9

THE HEALTHY BODY

"Health is something definite and vibrant, not merely freedom from disease." VICTOR HEISER

"HELLO, how are you?" This greeting, which is a modern version of the earlier custom of inquiring about one's health, is today practically a meaningless amenity. "Health" is a commonplace which we have grown up on both figuratively and literally. "Health" is a term that has become almost symbolic in our thinking.

Need for health comes first

Health, like virtue, probably cannot be taught to one person by another. It must be lived and learned. Is there anything more pleasurable than a feeling of "vim, vigor, and vitality"? Obviously not. Yet we apparently need to lose our health temporarily before we can appreciate its value. To teach health to people who have no conscious need for it offers no assurance that the knowledge gained will be either remembered or practiced.

While everyone is interested in his own health, one who has good health usually does not talk about it. It is somewhat like discussing ethics: when one's philosophy of life is in tune with reality he says little about it. Thurman B. Rice, in a book entitled *Living*, makes this point:

"Health bears the same relation to hygiene that character bears to a code of ethics. It is easy to teach ethics, but the teacher has no assurance that his prize student will practice the code of ethics which he understands so well and thereby obtain character. A student who had cheated on an examination was required by the teacher to go to the board and write a hundred times the sentence, 'Honesty is the best policy.' After an hour or so he came to the teacher and told her the work was done, and he was excused. A count showed, however, that he had written it only eighty-three times. It seems as if there were a little discrepancy between his understanding of the subject matter and his practice of it. So it is with the matter of health. Many persons who understand hygiene from a scientific standpoint fail to practice it in such a way as to insure good health." (8)

Here we have in a nutshell the problem of health. Knowledge is one thing; the application of knowledge is quite another.

Abundant health is seldom conserved. Rarely is anyone concerned with a problem that has never touched him personally. Most college students think little about health because they have so much of it. With health in abundance they spend it recklessly because they are not conscious of the need for conserving it.

"Health is that precious heritage
Of priest and layman, fool and sage;
It's worth a hundred times its cost,
But no one learns that till it's lost."

GEORGE F. SHEPARD, in *Hygeia*, October, 1940

Failure to appreciate what we have when we have it is a common trait. Losing health is the first step in keeping it, for its loss initiates the drive to regain and retain it.

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At such times individuals become concerned about the rules of health and take an interest in learning for themselves the principles of keeping their health.

Today the objective of sound health education is not only to get well but to keep well. The results of this concept of health can be seen in the increasing average life span and longer period of efficiency. Modern health procedure is to develop a sound body and mind capable of resisting disease. This is the reverse of waiting for disease to catch the individual and then calling the doctor to do the disease chasing. In the future, it is hoped, fees will be paid the doctor to keep us well, not merely to repair us after we are incapacitated. Ray Lyman Wilbur, in his recent book, *The March of Medicine*, says:

“The doctor who guides the normal people to continued good health will have to look at his patient from the standpoint of sound hygiene rather than as the receptacle of a disease that needs to be driven out.” (10)

Health is a matter of degree. Like everything else in life, health is a relative thing. Victor Heiser says, “Health is something definite and vibrant,” (5) and he points out that to talk about health as “merely freedom from disease” is to state the case negatively. We all recognize a poor health condition when it is accompanied by pain and fever, but few persons realize that sluggishness, fatigue without apparent cause, hating to get up in the morning, and facing the world with dull eyes are symptoms of poor health. These indicate a condition that can and should be overcome. The normal health expectancy of a young person is the highest degree of vibrant health which enables him to live his life with zest. He should not be satisfied with anything less.

It is difficult at times to distinguish between mental illness and physical illness. Jonathan Swift wrote, "The best doctors in the world are Dr. Diet, Dr. Quiet, and Dr. Merryman." Such experiments as those of Ivan P. Pavlov and Walter B. Cannon show that emotional strain or excitement impedes the flow of digestive secretions. If one is angry or distressed, then, he should not eat until he is calm again. Should this rule be disobeyed, physical illness may occur in the form of indigestion. This may in turn cause the individual to act abnormally. In a social situation, for example, he may make a curt remark that he would not normally utter. At the outset such difficulties may be only temporary and easily cleared up. The departure from normal behavior is slight. Suppose, though, that the bad mood persists and the person loses many friends by his actions. Then he begins to put up his defenses and to make excuses for himself. His behavior in this case is a few degrees farther from normal. Should the mood persist until he no longer has control and his actions toward others become dangerous, then he probably has developed a form of insanity such as a neurosis, or hysteria, or some other form of psychosis. In this case he has gone all the way from normality and is in need of hospitalization.

This illustration is a very simple one, but it shows that a condition of nervous or emotional strain not only may lead to a more aggravated mental disorder, but may give rise to actual physical illness. Similarly, a physical difficulty may result in a mental disorder. The illustration shows, too, that we have degrees of mental health as well as of physical well-being.

Here, then, is something to think about: *Being healthy is more than merely not being ill.*

Health orientation

What can a student do about health? A great deal. It is his own body and his own mind that concern him. Why should he continue with bungling experimentation when there is so much information available to him? The more general knowledge we acquire, the more specific knowledge we want. Health information is no exception. If our 1,250,000 men and women in college today could catch a vision of the value of health information, the impact of this wisdom on society would be terrific.

Charles E. Shepard of Stanford University, in his presidential address before the American Student Health Association, said:

“Health knowledge of the college student is naturally a lay knowledge, largely a reflection of the health information of his parents and whatever he has happened to learn in school. This usually consists of scattered facts of hygiene and a considerable amount of health misinformation. To fill in the gaps and to integrate sound health information, to correct faulty beliefs, to cultivate an interest in personal and community health problems, and finally to help the student toward sound health attitudes; these are the tasks, yes, the opportunities of the college physician.”

Acquisition of individual health knowledge is still a slow process in spite of the number of fine courses and health services offered by colleges. Such knowledge, however, is fundamental to an understanding of the basic problems of health.

The mystery of life

Is there anything more intriguing than a mystery? Albert Einstein has said:

“The most beautiful thing one can experience is the mysterious. It is the source of all true art and science. He to whom this reaction is a stranger, who no longer can pause to wonder and stand wrapt in awe, is as good as dead, his eyes are closed.”

The greatest of all mysteries is the origin of life. Life, and life only, produces life — it follows from the meeting of the microscopic sperm and the ovum. Despite all his knowledge of chemistry, physics, and biology, man has not yet been able to produce life in a test tube or to penetrate the mystery of nature's secret chemical substance, protoplasm. What is the nature of protoplasm and the electrochemical energy in it that underlies the life process?

To produce a likeness of the human body by chemical or mechanical means we realize has been impossible, yet how seldom do we stop to think about the wondrous ways in which our body performs for us! Do we ever observe how effectively the organs function in the processes of living, or how remarkably efficient the body is? The fact that all the body mechanisms function harmoniously and without disruption within the unbelievably resistant skin which wraps the tissues is quite wonderful. If one notes everything he puts into his stomach from breakfast to bedtime he cannot help but marvel at the way the bodily systems assimilate, distribute, utilize for action, and excrete these substances.

Some things we do know about life

The fact that man does not know the exact chemical ingredients of living protoplasm has not deterred him from learning how it works. Scientists have traced life's origin back to the cell and, beginning with the cell struc-

ture, have developed an amazingly clear set of facts about life at its source. As Renée von Eulenburg-Wiener states in her book, *Fearfully and Wonderfully Made*:

“All the functions of the body are essentially cellular functions. Nutrition, responses to stimuli, reproduction, health and disease, the whole of physical life and a large part of mental life depend on cellular activities. . . . The cell is the living unit of the organism. It embraces all hereditary qualities within its substance and is part of the historical development of the organism.” (4)

Just a little knowledge about the cell and its structure changes one's whole attitude toward the subject of living matter. It is the cell that the physician is concerned with when we are ill. It is the cell scientists study when they seek further understanding of life and ways to improve and prolong it. Biologists always start with the cell when they tell the story of life. The first demonstration the biologist or physiologist gives us in the laboratory is a view of a cell under the microscope.

The cell is composed of a gelatinous fluid mass, protoplasm, which is the “stuff of life.” Cell walls hold the protoplasm in place, and therefore cells are able to reproduce themselves as a unit. Eulenburg-Wiener points out that:

“All the cells are derived from a single fertilized cell, resulting from a union of a female germ cell and a male germ cell. After the cells have become specialized they normally lose the power to form cells other than their own kind. . . . The cells of many tissues are related in their structure to the function of the organ they compose.” (4)

This means that the cells in the heart, the kidneys, the muscles, and blood vessels differ in structure, and that

each is adapted particularly to the functions it performs. The cell structures differ not only in different organs, but also in different parts of the same organ, and are specialized for the work required of that organ.

Cells — the smallest living units of the body — are working units. They consume food, propagate their kind, and eliminate waste. A countless number of cells working together, each containing the “stuff of life,” make up the body and mind of the person. As long as the cells of any organ of the body or mind are healthy, that whole organ is healthy. It is the breaking down of cell tissues in any part of the body that causes disease and eventual death.

Loosely speaking, the cell, as the building block, is to living matter what the molecule is to non-living matter. Biologists working with the chemical properties of cell structures are developing new knowledge of life and its properties. This specialized work is referred to as “biochemistry.” Another branch of research, known as “biophysics,” is the study of the interaction of physical changes in cell structures. Crile states in this connection:

“We have introduced many lines of evidence that radiant and electric energy play just as basic a rôle in the operation of plants and animals as do radiant and electric energy in combustion engines and electric motors, which is to say that plant and animal life is constructed according to the law of physics.” (2)

The cell is the basic starting point for all health study. To study the cell structure and its functions we need both chemistry and physics, and therefore these sciences are important in the technical study of the health of the body. There are many physical aspects of the functions of the body that are not known even to scientists.

There are numerous other sources from which students

who are interested can gain more information. Our concern here is with a certain few factors which are conducive to the health of the whole body and mind.

Health and heredity

Knowledge on the subject of heredity is, without doubt, of great interest to college men and women. One who seeks information in the field of abnormal physiology and psychology is not necessarily morbidly curious. Somewhere in the subconscious mind, if not in the conscious, may be a desire to know if one has been tainted in his inheritance. He really wants to allay his fears. Then also there may be a dread of becoming the parent of a child who is physically diseased or mentally abnormal on account of inherited factors.

What we inherit physically and mentally is one thing, and what we do with our inheritance is quite another. To be born of healthy parents and to allow one's environment to ruin that health is both stupid and ignorant. To be born unhealthy and to acquire good health through right environment displays wisdom. In one case the need is to conserve health, and in the other it is to build health. In either case it is a matter of applying one's intelligence and knowledge of hereditary strengths and weaknesses.

Genetic laws. Within the germ cell for reproduction there are certain substances known as *chromosomes*. These chromosomes carry factors known as *genes*, which are believed to contain the actual inheritance traits from each parent. These inheritance factors are sealed and delivered at conception, and practically no change takes place within the body cells during the lifetime of an individual that affects the chromosomes in the germ cells transmitted to his children.

As background for the knowledge that each and every one of us is different from all others, it is calculated that each parent can produce 16,777,216 possible combinations of chromosomes. Scheinfeld has stated the possibilities thus:

“At exactly the right instant, the one out of 16,777,216 sperms which represented the *potential half* of you had to meet the one specific egg which held the *other potential half* of you. That could happen only once in some 300,000,000,000,000 times!” (9)

Here, then, is the basis for individual differences in all aspects of our being.

Galton's law of ancestral inheritance tells us that the traits one inherits follow a ratio; namely, $\frac{1}{2}$ of the inheritable traits come to the new-born individual from the parents, or $\frac{1}{4}$ from each; $\frac{1}{4}$ from the grandparents, or $\frac{1}{16}$ from each; $\frac{1}{16}$ from the great-grandparents, or $\frac{1}{128}$ from each; and so on. Sometimes a trait appears in an individual which is lacking in his immediate parentage but which was transmitted through his parents from earlier ancestry and can be traced only by checking a long way back. The well-established *Mendelian law of heredity* explains many such phenomena.

Certain specific characteristics are inherited. There are certain human characteristics which have been found to be inheritable. Among these are the following:

- (1) Color of the eyes
- (2) Cross-eyedness
- (3) Color blindness
- (4) Cataract of the eyes
- (5) Color of the hair
- (6) Curly hair

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- (7) Albinism (lack of pigment in skin and hair and pinkish eyes troubled by strong light)
- (8) Color of the skin
- (9) Hemophilia (failure of blood to clot — persons so afflicted are called “bleeders”)
- (10) Certain nerve diseases
- (11) Nervous-system development (intelligence)
- (12) Feeble-mindedness
- (13) Body build
- (14) Shape of the head
- (15) A special type of muscular atrophy
- (16) Weakness of certain organs

Most of these tend to follow the Mendelian principles of inheritance. Some characteristics are identified as dominant (example, brown eyes) and some as recessive (example, feeble-mindedness). Others are said to be sex-linked traits (example, color blindness), which are not predicted by the Mendelian law. Then there is multiple-gene transmission (example, color of the skin), which again does not follow the principles of the Mendelian law so definitely as does the transmission of dominant and recessive characteristics.

Characteristics we do not inherit. For many years the subject of what we do and do not inherit has presented a knotty problem. Lamarck, in the latter eighteenth century, led a school of thought which held that characteristics acquired during one's lifetime are transmitted by inheritance to following generations. Weismann (1834-1914) denied this. He cut off the tails of many generations of mice, but the new-born mice always had long tails. By this and other experiments he proved his contention that a mechanically changed body trait is not inheritable.

When it was learned that the chromosomes in the germ cells are hermetically sealed within each male and female and are not affected by external influences, the whole matter seemed to be settled scientifically. No matter how much the body is mutilated, the face scarred, or the feet deformed, the resulting characteristics are not transmitted in the genes. The father who is a professional baseball star does not transmit his prowess as such to his son. However, the son may inherit a suitable body build and other qualities so that he can develop the skill. His environmental influences may be so strong that he seems to be a "born player." Likewise, a mother who is an artist on the piano would not transmit to her child piano-playing skill, but she may transmit intellectual factors which include musical talent. The child could then develop the skill.

There are many fallacies extant about heredity, of which we should be informed. For example, there are no inherited differences among children because of being born in or out of wedlock, or because of being conceived in love passion or of parents who hate each other. Chromosomes and genes are not affected by psychological situations. The effects of these conditions upon an individual result from environmental influences, both intra-uterine and postnatal, brought to bear after conception.

The physical characteristics that are transmitted are not affected if the child is "unwanted." What counts in a child's development is how the parents treat him after he is born.

Nutritional difficulties which may affect the prenatal condition are not part of the child's heredity. They develop after conception. A lack of calcium in the mother which causes the child to have poor teeth is an example of this.

In other words, we now accept the general thesis that acquired characteristics cannot be transmitted by inheritance to future generations.

Nutrition, food chemistry, and the endocrines

Probably no subject is more discussed, or with greater ignorance, than nutrition. The blare of radios and the glare of advertisements argue the nutritive effects of certain foods, and glibly discuss vitamins and calories, or glorify the breakfast food that will make us supermen. All too frequently these are fairy tales. Do we swallow them whole? We may, unless we have information that causes us to know better.

Although there are many books and articles written on the subject of nutrition and diet, few individuals actually know their own best diets.

What is nutrition, and what do we actually know about it? Scientifically stated, nutrition is the sum of the processes of ingestion, digestion, assimilation, and utilization of food substances. The human machine needs food to supply the blood stream with the fuel to keep its billions of cells functioning.

The study of nutrition has been advanced remarkably by growing knowledge of food chemistry. Diet is important; no one today doubts that faulty diet may cause poor health. Nevertheless, it is characteristic of human beings to expect some nostrum to offset bad diet habits and to provide justification for eating indiscriminately.

The old saying to the effect that one man's meat is another man's poison states a fact well established in the study of nutrition. There is a tendency to jump to the conclusion that a certain food may be good for or injurious to everyone. Research shows that some individuals are allergic, or more sensitive, to certain foods than are others.

There are allergy tests which determine, by reactions to the inoculation of food extracts, whether the individual effectively assimilates a specific kind of food. However, this method is not believed to be infallible, and elimination diet is now considered a superior method of discovering food allergies. The latter is a process of experimentation by eliminating, one or a few at a time, each food that the individual ordinarily eats, and checking his physical reactions. For these tests a specialist in nutrition should be consulted, at least before definite conclusions are reached, because otherwise one might eliminate essential nutritional factors from his diet.

The effects of nutrition may be psychological as well as physiological. Even if a person knows the foods that are best for him, he will not necessarily eat them. People form tastes for certain foods and it is difficult to change their eating habits.

Beware of the diet faddist. Because of superstitious beliefs dating back to primitive times, human beings need to be constantly on guard against quackery and nostrum healing. Ray Lyman Wilbur says:

“Magic was the basis of a thought system which still is with us, although experiment and discovery have changed our whole outlook on the material phases of the world. It is a mental state subdued in the most civilized, but coming as a primitive inheritance to us all. Its significance has been overcome by the sheer development of science based on the experimental method; but even today its dominion over man is supreme among many races and potent in all nations and peoples.” (10)

Diet fads and health fetishes are rooted in this love of magic. Scientific facts are easily obtained. Take the reducing diets which many women adopt. Biochemists

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have facts about fat-solubles, and nutrition experts can offer diets which reduce weight without injury to the system. But unscientific, self-prescribed diets continue to take their toll among the ignorant ones.

Not all students are going to study chemistry as the central science in order to know about the effects upon the body of the foods they eat. However, there is much that anyone can readily learn about chemical reactions brought about by food. It is important to know that food changes the chemical composition of the blood, and that it supplies energy and thus influences the temperature of the body. That the glandular system is affected by chemical reactions induced by food also is a well-established fact. Various foods stimulate or depress the secretion of the hormones of the endocrine glands. Glandular secretions in turn modify the blood. R. G. Hoskins, of the Harvard Medical School, has this to say about the importance of the functions of the endocrine glands:

“The evidence is now conclusive that what we are — physically, mentally, sexually, and emotionally — depends in no small measure upon the functions of our endocrine glands. They coöperate in an important way in the regulation of our activities in health, and modify the course when they do not primarily determine our diseases.” (6)

Chemical elements in balanced diet

That the food we eat governs our body chemistry to such an extent that it influences our personality development physically and mentally is no longer in the realm of speculation. Biochemists are constantly bringing scientific information about food chemistry to the layman's comprehension, and this makes possible intelligent selection and balance in food intake.

Foodstuffs contain six different chemical ingredients: (1) carbohydrates, which provide fuel; (2) proteins, the tissue builders; (3) fats, which are used primarily for fuel but may be used for tissue (when used for tissue they are really reserve fuel, and are the first tissue burned to provide fuel if the supply is not replenished by adequate intake of food); (4) water, the most essential single constituent of the body, which plays an important part in secretion and in regulation of body temperature; (5) inorganic salts, which are essential to the blood, bone, and tooth tissues, operation of glands, and so on; and (6) vitamins, which we shall discuss briefly here because they have been discovered comparatively recently and the layman has been subjected to much misinformation and many misstatements about them.

Vitamins. As most of us know, vitamins are designated by letters of the alphabet, A, B, C, and so on. Harold S. Diehl, in his book, *Healthful Living*, points out:

“In time the nature of all vitamins probably will be known. Then the term will have lost much of its usefulness because the vitamins can be designated by the chemical names which describe their structure or nature.” (3)

It is an established fact that scurvy (a disease of the mucous membranes), rickets (a bone disease), and beriberi (a nerve disease) are due to deficiencies in vitamins. We know also that less definable states of ill-health may be due to vitamin deficiencies.

Vitamins do not provide heat, energy, or tissue-building material — these are provided by the other five chemical ingredients. Although the exact manner in which vitamins do influence nutrition is not known, science has proved that small quantities of them are essential to

growth and health. It is known, too, that natural foods provide the best source of vitamins and that ordinarily a balanced diet should provide an adequate supply of the various kinds. They can be obtained also in concentrated form to supplement the vitamin content of food.

The need for effective, nutritional balance between carbohydrates, proteins, fats, water, inorganic salts, and vitamins is of paramount importance in maintaining a healthy, vigorous body. There are books on the subject of nutrition written by Harold S. Diehl, Henry C. Sherman, E. V. McCollum, and others, in which the chemical content and values in foods are given in detail. The student may refer to them for guidance regarding diet.

The significance of metabolism

Another factor of importance to health is the rate at which ingested food is converted into energy. This conversion, or burning, produces heat which can be measured in calories. The process by which food as fuel is stored in the body and burned as required is known as "metabolism."

In Kirkpatrick and Huettnner's *Fundamentals of Health* is a compilation of the results of studies on metabolism. The following quotation gives a brief description of the beautifully regulated process of metabolism which is so essential to the healthy body:

"The protoplasm of the cell carries on all the vital processes of the organism. Therefore within the cell occur many and varied chemical reactions. It digests food and for this purpose elaborates its own chemical substances. Food which has been broken down into its simpler elements by digestion in the alimentary tract of the organism is resynthe-

sized, or built up into living cell substance, or perhaps is oxidized to produce heat and motion. Protoplasm must also obtain oxygen for combustion and eliminate carbon dioxide. Moreover, it possesses the property of growth, is capable of movement, responds to stimuli, and excretes the waste products of metabolism. The chemical processes contributing to all the changes and activities of protoplasm are included under the term *metabolism*."

The human body consumes its fuel in relation to the amount of energy it expends. When given more food than it can utilize immediately for fuel, the body accumulates it as fat for use when needed. This is the reason for measuring caloric content of foods when trying to maintain or attain a certain weight. Books on nutrition contain tables showing the caloric content of foods and the demands of the body for energy.

We have noted that visceral changes take place when we are in a state of anger or fear. What actually happens at the time when the body needs added strength to meet an emergency is that sugar enters into the blood stream to supply the added energy necessary to cope with the situation. A potent hormone known as *insulin* is secreted by the gland cells in the pancreas to control the sugar content of the blood. This sugar goes to the tissues, where it can be burned readily as fuel. When the coach gives his team sugar, or the mountain climber eats chocolate, or the race-horse owner gives his horse sugar, the result in each case is added energy for a specific physical feat.

In our normal lives our bodies burn or oxidize their ingested material at a less rapid rate. The rates of fuel storage and fuel consumption must balance for good

health. There is a normal metabolic rate for each individual. The basal metabolism test determines the total amount of oxygen the individual at complete rest uses in a given time and so gives an idea of his body's ability to burn fuel.

It is known that the thyroid gland secretes a hormone called *thyroxin*. When there is an over-balance of thyroxin secretion the person has a high basal metabolic rate; that is, he burns more than an average amount of fuel. Should the basal metabolism test of a man or a woman indicate a minus metabolic rate and the person be sluggish and tired, the physician may prescribe a thyroid gland extract to compensate for the partial deficiency of thyroxin in the individual's body.

Food is to the body what fuel is to the engine. As energy, both food and fuel are measured in terms of their heat value. The calorie is the unit measure of heat energy in the body. Walter B. Cannon, in his book, *The Wisdom of the Body*, gives experimental evidence that exposure of the body to cold increases the metabolic rate; in other words, more fuel is required for the body when it is cold than when it is warm. Thus it becomes clear that the body engine regulates itself through its metabolic processes.

Fatigue in relation to health

The human being rarely overworks either mentally or physically. Edmund Jacobson, a well-known authority, in discussing the subject of exhaustion says:

“The amount of activity necessary to produce fatigue or marked changes in pulse, respiration, and other reflex activities varies from time to time with each individual, owing to many possible influences. At times the result may be produced by

an increment of activity which ordinarily would be considered slight. Such an increment then would very properly be called 'excessive activity' *relative* to the occasion on which it produces fatigue or other disorder. A simple arithmetical exercise may prove severely trying to a patient with fever. We conclude that the general state of the organism at a particular time, as well as the character of the activity, determines whether the latter should be considered excessive." (7)

It is clear that fatigue is both physiological and psychological, and that one needs to find the cause if one is to eliminate the fatigue. One may feel tired and exhausted even when he has done nothing. For example, if a person should receive a shocking piece of news, he may feel fatigued almost immediately. It is not work that kills; it is the condition of our health at the time the work is being done that does the damage.

No one can describe fatigue exactly, but everyone is aware that he does not feel right when he is fatigued. Whether we are muscularly tired, mentally tired, or just plain bored, the condition probably is one of fatigue. At such times bodily resistance to infection is low and the mind's ability to resist depression is diminished. Often a person is not conscious of this condition. A few ways to recognize it are:

1. The sense of hearing is dull. The individual is inattentive, listless, and unable to concentrate.
2. Vision is blurred. It is difficult to follow a printed line on a page or to see clearly any graphic representation.
3. The sense of touch, or dermal sensitivity, is impaired. This is accompanied by a general absence

of feeling over the whole body — the opposite of healthy vigor.

These factors tell us when we are fatigued. Some of their results may be enumerated:

1. We make errors in intellectual judgment and in speech.
2. Muscular coördination is poor and we become awkward. Automobile accidents frequently occur under these conditions.
3. Our morale is low, and we are subject to fear, worry, and suggestion.

In short, our whole personality is temporarily disintegrated.

What is the remedy? Rest. This is the first prescription the physician gives when physical illness overtakes one. It is the first suggestion made by the psychiatrist to the victim of a nervous breakdown. The outstanding exception is in the case of emotional fatigue or boredom, for which active work may be the best cure.

Rest is more effective when taken in short spells than when enjoyed in big doses. A long rest does not compensate for having worked at high speed over a long period of time. Variation in one's activities is important. Short periods of alternate work and rest are the true preventive of final exhaustion.

Mother Nature is a wise old parent. As her children we must learn to obey her laws. Nature's first warning is the fatigue we feel if we disobey the law of rest. The next warning is pain. There may also be a rise in body temperature. If we do not stop then, Nature gives us more vigorous warnings and we may need to go to bed for repairs.

Rest is not complete without relaxation. Much of the difficulty in cases of fatigue comes from what is known as "tension." Tension is a feeling of emotional strain or suspense in which the muscles react as though they were working against resistance. Relaxation is the cure. Jacobson (7) points out that, "Upon complete relaxation, frequently repeated, fatigue generally disappears." Some people, however, are born with a tendency toward being high-strung and tense, and find it difficult to relax. Jacobson refers to individuals in his laboratories who, when told to lie down and rest, would do so but would be unable to relax. Rest is not complete until the nerves and muscles are fully relaxed. Sleep usually follows complete relaxation.

Few people know how to relax completely. Many muscles of the body are subject to voluntary relaxation. Jacobson demonstrated that even the muscles controlling the eyeballs can, with practice, be relaxed at will. A simple physical way to release tension is to drop the jaw and slacken the muscles of the face to the extent that one looks foolish. It is said that Napoleon could relax and sleep almost instantly, and could be awakened in fifteen minutes and be completely refreshed.

Relaxation is the first principle in good-health practice. We all know that we are relatively more calm and composed in the morning after a good night's rest. The unconsciousness of sleep has produced relaxed muscles. Some individuals have natural powers of relaxation during daytime intervals. As a result, they can complete a day of excessive tension with only such normal fatigue as the actual mental or muscular work has brought.

Failure to "let down" at intervals during the day causes cumulative fatigue in direct proportion to one's continued tension. Note the student who is always

behind in his work. While he is in one class, he is likely to attempt to prepare an assignment for the next one. At the end of the day he is "worn out." Anyone who, while he is performing a present task, thinks constantly of the next thing he is to do, is bound to be tense.

Rhythmic work habits, wherein a person takes first things first and at opportune periods rests and relaxes, result in tension-free action. The digestive organs and other bodily processes then function properly, and the day closes with the worker ready for restful sleep, which will prepare him for a fresh start the next day. Such is healthful living.

Sleep correlates with health. There has been a good deal of study and experimental research dealing with sleep. Carlson and Johnson point out a number of bodily changes that take place during this form of complete rest:

"There is a general depression of tissue and organ activity; muscle tone is greatly diminished, and the circulation and respiration are slowed. Reduced tissue activity is reflected in a lower metabolic rate, which in sleep is often some 10 per cent below the 'basal' level. . . . The body temperature is lower during sleep than in the waking state." (1)

These authorities aver that although fatigue favors sleep, it does not necessarily induce it. One may be fatigued and yet be unable to sleep because of pain or of discomfort resulting from inner stimuli such as light or noise.

It is agreed, however, that muscular fatigue is conducive to sleep. Fatigue favors sleep in essentially the same way as darkness or quiet. Muscles relax when stimulations of the senses are absent. Relaxation ultimately leads to sleep.

It has been found that animals die when they are prevented from sleeping. As a matter of fact, the human body can withstand hunger for longer periods than it can lack of sleep. While we have conclusive proof that sleep is essential to life, scientists have been unable to tell just why.

How much sleep is needed to maintain efficiency is known to vary with individuals. The average for adults, according to tests, is about eight hours out of twenty-four. Some individuals need more; some can do with less.

When an individual is healthy, alert, and in good humor, the indication is that he is getting sufficient sleep. Everyone knows that illness, pain, and worry cause sleeplessness. Books on health give methods for curing insomnia. The obvious cure is to remove the cause.

Some conclusions about health

To have good health, and to know that we have it, gives zest to living. To be healthy is to be vibrantly so; anything less is not enough.

A felt need for health furnishes motivation for gaining health knowledge. As with the conservation of other natural resources, we feel the need for conserving our health only when we do not have it in abundance. However, the trend today is toward prevention of illness. We now believe that one can acquire health knowledge without the bitter experience of losing his health. Medical science can help us more if we have knowledge of what it is trying to do for us.

To know about healthful living is important, but to practice it is even more so.

The origin of life is still a mystery. Man has not yet produced life outside Nature's laws. Nevertheless,

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man has learned much about how the body and mind function. We know that the unit of life is the cell, and that its protoplasm is the "stuff of life." Each tiny cell lives by ingesting food, eliminating waste, and propagating itself as a unit. A countless number of cells make up the whole body, which in turn, with all the cells co-operating, carries out its functions in a similar way. Thus, to know about the cell is to know about the body.

The laws of heredity give significance to possible predictions of why we are like we are, and also what our children may be like. As time goes on the science of eugenics (human mating) will play a greater and greater rôle in health knowledge.

The individual who is wellborn is fortunate, but if one has hereditary weaknesses much can be done to correct them. The environment we provide for our body and mind is subject to control by increased health knowledge.

It is essential to understand what happens to food when it is ingested. A properly selected diet produces a balance between the six chemical ingredients in food: carbohydrates, proteins, fats, water, inorganic salts, and vitamins. This does not mean that one needs to measure and calculate everything he eats. Most of us follow balanced diets without thinking about it. Our bodies are so wonderfully constructed that they eliminate whatever they do not need. . Even so, there is a limit to what the stomach can effectively digest.

Knowledge about food allergies and their effects on health should be acquired by everyone. Tests by inoculation are thought not to be so reliable as elimination diet procedures for discovering food allergies, although the latter take longer.

A working knowledge of vitamin content and calorific value in diet is needed in feeding the body. With this

knowledge we shall recognize Nature's warnings when our bodies have been overworked. The rate at which ingested food is converted into energy also is fundamental knowledge for health. An individual's basal metabolic rate can be determined by use of a machine which measures the heat produced by the body's consumption of its fuel.

Medical science constantly is finding new ways of balancing glandular secretions for remedial use when an individual's health is impaired because of malfunctioning glands. The effects on the body of glandular imbalances are not well known, and in this field, as in others, one needs the advice of a reliable physician. The principal thing for the layman to know about such technical methods of keeping healthy is that they exist, and that he should seek and act upon medical advice when it is needed.

Control of fatigue by relaxation and restful sleep is basic to good health practice. Sometimes, however, the best cure for emotional fatigue is to take physical exercise or to absorb oneself in some agreeable kind of work.

That it is difficult to distinguish between bodily mechanisms and mental controls is true. Many times a distinction cannot be drawn between body and mind reactions. This is something to which we have given all too little thought in the past. The next chapter sets forth some mental health aspects of the individual.

SUGGESTED FURTHER READINGS ON THE SUBJECT
OF HEALTH

1. CARLSON, ANTON J., and JOHNSON, VICTOR. *The Machinery of the Body*. University of Chicago Press, Chicago; 1937. Page 427.

The authors say of this 580-page book, "This elementary introduction to the machinery that regulates the animal body is a precipitate of years of experience with the attempt to teach human physiology to college freshmen at the University of Chicago." No more authoritative semi-technical and readable book on the human body and its health is in existence today.

2. CRILE, GEORGE. *The Phenomena of Life*. W. W. Norton & Co., Inc., New York; 1936. Page 88.

Few medical men are better known in their own profession and to the public than was Dr. Crile. This book of some 380 pages gives a "radio-electric interpretation" of life that is illuminating and authoritative. It is semi-technical but easy to read.

3. DIEHL, HAROLD S. *Healthful Living*. McGraw-Hill Book Company, Inc., New York; 1935. Page 125.

This is an easy-reading, authoritative book of 450 pages. It is packed full of useful information both for persons seeking to keep their health and those seeking to regain it. The subject of nutrition is very well covered. The book contains a very complete classified bibliography.

4. EULENBURG-WIENER, RENÉE VON. *Fearfully and Wonderfully Made*. The Macmillan Company, New York; 1938. Pages 7, 11.

This is an exceptionally valuable book of facts relating to the human body from the cell, the "fundamental unit of the living organism," to "the human organism as a whole." It contains 472 pages of interesting reading on the subject of body structure and functions.

5. HEISER, VICTOR. *You're the Doctor*. W. W. Norton & Co., Inc., New York; 1939. Page 10.

This is an easy-reading book of some 300 pages. The style is chatty and the information is authoritative, as Dr. Heiser has an excellent medical reputation. He is a living example of what he preaches. This is popularized medicine to the last turn and reads like a novel. Dr. Heiser is the author, also, of *An American Doctor's Odyssey*, a widely read book.

6. HOSKINS, R. G. *The Tides of Life*. W. W. Norton & Co., Inc., New York; 1933. Page 16.

In this 352-page book Dr. Hoskins has told the story of the glands. It is easy reading and authoritative, and undoubtedly contains the most information on the endocrine system available for the lay reader in any one volume.

7. JACOBSON, EDMUND. *Progressive Relaxation*. University of Chicago Press, Chicago; 1938. Pages 10-11, 11.

Dr. Jacobson says, "The present studies of neuromuscular tension and relaxation, although begun twenty years ago, are still in the early stages of development." The importance of relaxation for rest and prevention of illness is amazing. Members of the medical profession were so enthusiastic about these studies that Dr. Jacobson, at their request, wrote a popular book based on this 494-page report. The title of the popular version is *You Must Relax*. It is a small book of 200 pages styled to easy reading.

8. RICE, THURMAN B. *Living*. Scott, Foresman & Co., Chicago; 1940. Page 447.

This book of 455 pages is written by an eminent authority in medicine. The style is simple, forceful, and non-technical. An early statement in the book is, "Modern hygiene emphasizes the functional rather than the anatomic phases of the body . . . it is a compilation of working instructions rather than a set of blueprints."

The Healthy Body

9. SCHEINFELD, AMRAM. *You and Heredity*. Frederick A. Stokes Company, New York; 1939. Page 29.

This book of 343 pages is packed full of the most readable material on heredity yet published. Although written for the layman, it is solid scientifically. It was a Book-of-the-Month Club selection.

10. WILBUR, RAY LYMAN. *The March of Medicine*. Stanford University Press, Stanford University, California; 1938. Pages 258, 73.

Dr. Wilbur, physician, teacher, and statesman, has compiled in this 280-page book thirty of his speeches of the last twenty-five years. The book is filled with salty humor. It is full of facts of the past and predictions on health conservation in the future.

Other useful books in this field are:

- BAUER, WILLIAM WALDO. *Health Questions Answered*. Bobbs-Merrill Company, Indianapolis; 1937.

- CANNON, WALTER B. *The Wisdom of the Body*. W. W. Norton & Co., Inc., New York; 1939.

- FISHBEIN, MORRIS. *Modern Home Medical Adviser*. McGraw-Hill Book Company, Inc., New York; 1937.

- *Your Diet and Your Health*. McGraw-Hill Book Company, Inc., New York; 1937.

- JACOBSON, EDMUND. *You Must Relax*. McGraw-Hill Book Company, Inc., New York; 1934.

- KIRKPATRICK, T. BRUCE, and HUETTNER, ALFRED F. *Fundamentals of Health*. Ginn & Co., Boston; 1934.

- MCCOLLUM, E. V., and SIMMONDS, NINA. *The Newer Knowledge of Nutrition*. The Macmillan Company, New York; 1929.

- SANSUM, WILLIAM DAVID; HARE, ROBERT AMMIEL; and BOWDEN, RUTH. *Normal Diet and Healthful Living*. The Macmillan Company, New York; 1936.

Chapter

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MIND AT THE HELM

"We have not to build up a body nor a soul but a human being, and we cannot divide him." MONTAIGNE

EVERYONE has at some time had an experience which caused him to say, "If I had been in my right mind I would not have done that." What one actually means is, "If I had been fully conscious of all the facts and had thought the matter through, I would have done otherwise." What is it in life that enables us to make decisions? It is the ability to take several factors into consideration, mentally to weigh their relative importance, and then to choose a course of action. We recognize this ability as intellectual and related to what we know as "mind." Mental ability no doubt is a major factor in understanding situations and in dealing with them in consciousness, but we must consider the mind as being constituted of more than intellect alone.

There is no point here in discussing age-old controversial issues. However, there is ample evidence to indicate that mind and body are closely interrelated. Therefore, because it is clear that mind is more than intellect, or the thinking process, we should attempt to describe what we believe it to be.

Mind apparently is closely associated with consciousness, so much so that many authorities speak of mind as being consciousness. When we are conscious of something we are aware of it. Warren's *Dictionary of Psychology* defines consciousness as "the sum total of an individual's experiences at any given moment." One may feel an experience emotionally or physically; he may perceive it through his senses; he may will it by making a conscious decision; or he may think about it. All these sensations are functions of both consciousness and mind. The mind functions by feeling, perceiving, and willing, as well as by thinking.

The mind and body relationship

Ignorance still prevails regarding the body-mind concept. We know that the body influences the mind and that, conversely, the mind influences the body to such an extent that in operation we can consider them practically as one. Such eminent scientists as Walter B. Cannon and Ivan Pavlov have shown this conclusively. For example, Cannon states:

"Among the organs that are affected to an important degree by feelings are those concerned with digestion. And the relations of feelings to the activities of the alimentary canal are of particular interest, because recent investigations have shown that not only are the first stages of the digestive process normally started by the pleasurable taste and smell and sight of food, but also that pain and great emotional excitement can seriously interfere with the starting of the process or its continuation after it has been started." (2)

Everyone knows that excitement over a piece of bad news will cause one's heart to begin to thump. Even

when sitting quietly a person may feel his heart accelerate under the sole stimulus of some exciting idea. Thus a mental process brings about a physical reaction.

William S. Sadler, an eminent neurologist, in his book, *The Mind at Mischief*, (9) makes it clear that the brain is the organ of the mind. So also is it an organ of the body. Sadler points out that when we think, or experience an emotion, or react to some sensation, actual physical changes take place in the brain. No experience we ever have is lost, because it makes its imprint on the brain cells. Authorities agree that every thought or idea that passes through the mind leaves a neural trace.

This dispels the earlier psychological theory that the mind is made up of powers or faculties that are separate and distinct from those of the body. Psychologists have replaced speculation about mind with scientific facts. Biologists and physiologists have provided more exact knowledge of bodily functions. As we look back, it is clear that discoveries in the field of the mind and physical discoveries had to come together.

How the mind functions

Even though it is known that the mind and body work together in very close relationship, the process is not a simple one. Because of great individual differences in inheritance and environment, and the very complicated ways in which the body and mind react to stimuli or experiences, there is no formula for the way in which the mind will function in response to any given stimulus.

We behave the way we do because we are what we are. We do some things we do because we were psychologically conditioned to do them when young.

Emotional fixations cause mind difficulties. When the eyes are focused on a certain point, we say they are *fixed*

on that point. Similarly, ideas and attitudes often become fixed in our minds. These emotional fixations may occur when we are very young. A fixed idea which is the result of an immediate experience may wear off. Other ideas may become so firmly lodged in the mind that they become a definite part of one's personality. A life-ambition is an example of this sort.

An individual may get a fixed idea which deters his progress. Howard and Patry, in their book, *Mental Health*, define this kind of fixation as "an excessive emotional attachment which weakens or hinders the capacity for normal adjustment and normal growth." (4) Erotic fixations, parental fixations, occupational fixations — all come under this classification and all call for control, if one is to progress from level to level of maturity.

We are all familiar with cases of young men or young women who have been "tied to mother's apron strings." The results of such a fixation are apparent when the boy or girl is away from home for the first time. Mother or father, or both, in their anxiety to protect their son or daughter, unconsciously have made the child too dependent upon them. The parents get a sense of self-satisfaction from this dependency and fail to see the harm they are doing by over-expressing their love. This is a mental-health problem for both the parents and the child.

The case of June K. illustrates a typical parental fixation. During her first days at college June wrote to tell her mother how much she was enjoying herself: "I am really happy here. I like my room. My roommate and I already are good friends. The food is very good," and so on. One would expect her mother to be glad her daughter was happy in college. Examine the mother's querulous reply: "Weren't you happy at home? Didn't you like your room here? I always thought you were satisfied

with our food. Don't you miss your father and me?" In this case the mother had the fixation. Some disappointment in early life may have caused her to fix her whole attention on her child.

There also are many instances in which sons and daughters fail to progress to the next level above childhood. They accept parental attentions to the extent that they retain childhood fixations to the parent and never mature to the point where they make their own decisions. Such a person seldom marries. He cannot break the bond and establish his own home. If he does marry, the marriage may fail because of his childhood conditioning. For example, a young man with a parent-fixation may unconsciously look to his wife to mother him, or the young woman may expect her husband to pamper her as her parents have done and may resent any implication that she is an adult and should take on adult responsibilities.

The father who is too proud to have his daughter work may cause her to develop a fixation which takes the form of an aversion to any kind of work. This fixation may in turn even disqualify her for the vocation of homemaking and motherhood.

It also happens frequently that a man is not able to free himself from a "blind-alley" job-fixation.

Early conditioning and the kind of fixations we form in early life may well govern our whole lives. We cannot forget past events. "They are fixated in reminiscence," (7) says Overstreet in his book, *About Ourselves*. Most normal persons are disinclined to press out into the future because of early fixed ideas — most of them fears of some sort. This undoubtedly is the background for a craving in human nature for security.

Memory and recall. Probably the most striking of our mental capacities is memory. Leonard T. Troland, in a
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book entitled *The Mystery of Mind*, points out regarding memory:

“Impressions of the past, although not constantly present in consciousness, are nevertheless retained so as to be available at any instant. They are said to be retained in or by the mind.”
(10)

In Chapter 3 we discussed the psychological aspects of learning in connection with the association of ideas, but we did not mention its physical aspects, which center in the brain as the organ of the mind. In the gray matter of the brain (cerebrum), neural connections register everything that happens to an individual — every experience he has, however important or insignificant. It is obvious that one cannot keep in consciousness, ready for immediate use, every experience he ever had. Therefore, much that we learn becomes lodged in a level of the mind below that of consciousness.

Figuratively speaking, the brain is the banker for the mind. It registers and files each deposit of experience in a vault, so to speak. This storehouse of learning experiences is called the subconscious mind. As information is needed, the nervous system sends a message, or stimulus, which usually takes the form of an experience that forms an association with past experiences. This message draws the earlier experiences from the subconscious-mind account into the conscious mind, ready for use. The more often the experience has been repeated and the richer and more recent it is, the firmer is the physiological connection in the brain and the easier is the process of recall — that is, bringing the experience into consciousness.

The banker-brain delivers only that which is demanded by some stimulus. Because of the brain's efficient filing system, all experiences can be brought out upon demand,

simultaneously or in logical sequence — provided, of course, that the stimulus is strong enough to energize the neural connections. The emotions, perceptions, will power, and thinking all affect the strength of a stimulus.

Frequently a seemingly forgotten experience forms a disturbing factor in personality. Such a disturbance obviously is a psychological situation, but it is also a definite physiological condition — one in which the actual neural connections with the brain and the physical impressions on the gray matter are factors. The case of a young man whom we shall call Reg illustrates this. In his junior year in high school Reg learned that he would be unable to take up an engineering course in college because he had failed consistently in mathematics. His desire to become an engineer was keen. When he sought advice, he was counseled to consult a psychiatrist who had had experience with similar problems. By skillful analysis the psychiatrist helped Reg to recall that when he was in the fourth or fifth grade he had encountered difficulty with arithmetic and that the teacher had humiliated him before the class by calling him a “blockhead.” This incident, though seemingly forgotten, had affected all his later learning in the field of mathematics.

Physiologically, this situation arose from one habitual series of neural connections which was developed by his experiences in arithmetic. Although Reg “forgot” the specific incident, the neurons continued in their habit-pattern wherever mathematics was involved and thus effectively blocked his learning. Having learned the cause of his difficulty, and having gained assurance that he had the necessary native ability to learn mathematics, he was able to break the habitual neural connection and to master the subject.

We remember but a very small part of our experiences.

Indeed, we could remember scarcely anything except for the fact that we forget almost everything. Bergson, the great biologist, says the brain is the organ of forgetfulness as well as of memory. The subconscious mind becomes the storehouse for these "forgotten" experiences, which can then be resurrected when recall is stimulated.

Often memory produces the results of wrong interpretation; that is, we perceived originally in a way that registered a deceived belief. These incorrect beliefs lead to false conclusions and may cause mental-health problems.

Mental hygiene

Everyone knows what we mean by physical hygiene. Few people give a thought to mental hygiene, even though the mind controls much of what the body does. To illustrate: If an individual cuts his finger, he cleanses the wound at once, disinfects it, and wraps it up to protect it from further infection. On the other hand, if he is prone to blame others for his failures and to compensate for his inadequacy by resorting to boasting or whining, he may know very little of what to do to cure this type of illness. Actually, this mental-health situation is just as real as the cut finger. There is a great deal to know about mental hygiene and prevention of diseases of the mind, but, as compared with physical hygiene, education in the mental field is woefully lacking.

As with physical health, one does not do much about mental health until there is a felt need for it. We deal with the affairs of our life according to the attitudes we have formed toward life's situations. With this interpretation of our attitudes we can think of them as affecting mental health, which we all have in various degrees just as we have physical health. Mental health and physical health are practically inseparable.

The importance of mental hygiene. The study of mental hygiene, although more intangible than physical, is now progressing rapidly under neurological, psychiatric, and psychological research, and has reached the status of an international movement. Clifford W. Beers, who wrote the famous classic, *A Mind That Found Itself*, (1) was the organizer and first secretary of a national association for the promotion of mental health, that dates back to 1909. Beers recovered from insanity under institutional care. His story probably has contributed more than any other single effort to the improvement in prevention and cure of mental illness. Mental-hygiene societies have disseminated information so effectively that there is now enlightened public recognition of the importance of mental hygiene.

According to recent government statistics there are over a million patients in hospitals in our country. Nearly half these cases are mental patients. We perceive, then, the far-reaching extent of mental illness. Psychiatrists and psychologists estimate conservatively that 40 to 50 per cent of these mental illnesses could have been prevented. They say that if mental hygiene had received as much scientific attention as physical hygiene has during the last four or five decades, there would be far less mental illness today.

The approach to mental hygiene. The older generation often regales young people by saying, "This is the happiest time of your life." Authorities on mental health, on the contrary, agree that adolescence and immediate post-adolescence are the most trying periods of a person's life. Success in steering one's ship past the dangerous rocks at this time means an easier course through the open seas later. Tranquillity of mind accompanies maturity if healthy mental attitudes have been acquired in youth.

College students have to make many decisions for themselves. Individuals vary in the way they meet conflicting day-to-day situations. Young persons who have always had their own way need to make one kind of adjustment; those who have been dominated by others and have had all courses of action planned for them require another type of adjustment. The student who has had a good balance of "give and take" in his early conditioning obviously is the fortunate one. In any case, good adjustment to life is possible if one's desire for it is strong enough. Mental hygiene, as a basis for developing a wholesome personality, is now a science the laws of which can be stated and learned. Once these laws of human conduct are mastered, there is assurance that tranquillity will come with maturity.

Basically there is no justification for conflict between youth and age. The old have been young and the young are destined to become old. How mental hygiene may serve as a common denominator in the eternal conflict between youth and age is illustrated in the following incident.

John was a resident student at a college twenty miles from his home. His father was fond of him but had assumed a dominating attitude toward him. On this particular occasion John's father telephoned and said, "We are having guests for dinner Friday evening and Mother and I want you to join us." "Sorry, Dad," John replied, "I can't come. I've a date with Jane that evening and it's too late now to call it off." His father refused to listen to John's explanation and hung up with the flat statement, "We shall expect you."

After Friday evening passed, John began to worry about the incident. Finally he sought advice. He said, "I'm in a jam. I went on my date and didn't go home. What mental-hygiene method will get a fellow out of this one?"

I'm willing to go the limit in straightening this matter out if there is a way."

He was advised to go home the first evening possible and to go to the library, where he probably would find his father shortly before dinner. He was told to step right in and say, "Dad, I'm sorry about last Friday evening. I wouldn't willfully hurt you for the world. Will you talk it over with me?" He was reminded also that his father's attitude toward him would be more colored by emotion than it would be toward an employee or someone outside the family. John had sufficient knowledge of mental hygiene to realize that this was not a fifty-fifty proposition — that at the outset he must go at least 90 per cent of the way to establish a basis for understanding.

John's father was impressed by his son's ability to face the facts, and his respect for John as a person was greatly increased by the way he handled the situation. John's word for it was to the effect that, although he did not think it could be done, this incident resulted in a real friendship between himself and his father.

Situations involving mental health are present constantly. Often they are so near to us that we fail to recognize them. John knew that he had a personal problem to solve and that he must find its solution in his knowledge of mental hygiene. He was so close to it that he needed guidance. Until he had made an objective situation of it he could not see how to resolve the difficulty. He was helpless as long as his reaction was childish. If he had followed his natural inclination, which was to feel resentment toward his father, the breach would have become even wider.

How many misunderstandings and lawsuits could be avoided if both sides could leave their emotions out of the difficulty and settle their differences solely on the facts of

the case! The mental-hygiene approach to personal maladjustment and consequent inability to get along with other people is largely a matter of common sense.

Good adjustment and mental hygiene. In his book, *About Ourselves*, (7) Overstreet has shown that many maladjustments are caused by regression to the infantile level — that is, childishness. Infantilism is to be seen in the pushing off of the disagreeable, the misery long drawn out, the self-indulgence, the boasting and bullying, the infantile humor, and other evidence that childhood is not far back in the emotional life of the individual. Recognizing these traits when we perceive them brings insight and better mental health and adjustment.

Even though there is much that we do not understand, the practice of accepted mental-hygiene principles discloses better ways to live with ourselves and with other people and leads to happiness.

The normal mind

To keep right side up at all times, to face facts boldly, to move steadily in an intended direction, and to control and utilize one's mental abilities — each of these in some degree is necessary for every living being. William H. Burnham, in his book, *The Normal Mind*, shows that the normal mind possesses mental unity, wholeness, and wholesomeness. The person who loses his mental health is said to have "gone to pieces." If it is only temporary and he recovers, he has "pulled himself together." The individual who has never enjoyed "mental unity and integrity," says Burnham, is a "scatterbrained person."

The degree to which the individual maintains a harmonious adjustment to himself and to his environment measures his normality. The experiences a person has in his everyday living constitute the stimuli which register

normally or abnormally in his mind. The way the individual reacts depends upon his habits of adjustment.

The kindly, pleasant old person whom all of us are glad to meet, and the crabbed one whom we all try to avoid, display characteristic mental habits which have shaped their lives. Which type of old person one will become can be determined by oneself, but this choice is possible only in early years. With age, one's disposition becomes tenacious and more or less unalterable. The person who desires to become the pleasant type will avoid chronic irritability, impatience, worry, fret, excessive ambition, and will practice courtesy, serenity, poise, and other balancing attributes. Otherwise he may expect to grow more crabbed, more unlikable and unhappy through the years, and to have for company at last only wrinkles and crow's-feet. Let no one blame sour personality upon old age itself. Old age is naturally happy, charitable, forgiving, broad-minded, and likable. If it seems to be the opposite, the fault is in what the individual has made of himself.

Fear, the great disturber of mind

"Fear is probably the most cruel of all pains," says William S. Walsh in his book, *Mastery of Fear*. Fear is a primary emotion, often regarded as self-protective in nature and as the most important of the survival instincts. It is a mental expectation of pain or suffering.

Some fears are universal and common to all living creatures. Not even the bravest are free from fear. Courage conquers fear, but does not deny its existence. Sadler points out that fear as "an impulse which is responsible for caution, forethought, and prudence" (9) may be a desirable restraint. However, he adds that unwarranted fear is the cause of much sickness and sorrow.

Fear that causes one to be thoughtful and cautious may be good, but if it results in a constant state of indecision it is dangerous.

As we know from our study of physical hygiene, the effect of fear is to set up physiological reactions which prepare the body for flight. Its effect is to prepare the organism for violent action by toning the muscles, reorganizing breathing, stopping digestion, and bringing about changes in the glandular secretions. The secretions from certain glands release sugar into the blood stream to provide energy for physical action. These secretions were biologically useful to primitive man, because his physical strength was thereby increased for flight. But in our civilization a purely physiological reaction to fear does little good.

Fears are sometimes vague and consequently difficult to analyze. For example, a person who has been chased several times by a vicious dog may become afraid of that dog because he has not learned how to handle it. His fear may extend to all dogs, or even to all furry animals, even though he may not have had any directly unhappy experiences with them. Unconsciously, this may arouse in him all his fear behavior — instead of a specific fear of one dog, he may develop vague, personality-enveloping fears. These are even worse than specific fears, because the more vague the fear, the more difficult it is to locate the cause.

Fears have another troublesome trick, that of putting on disguises. Frequently we have to deal with fears that are merely symbols of other fears which defy analysis. These disguised fears are dangerous to mental life and sanity.

Hans Fallada, in *An Old Heart Goes A-Journeying*, tells of a professor who during his lifetime displayed an inability to handle money even for the simplest transactions. The cause, long buried in pain-covered memories, lay in

an incident which occurred when he was seven years old. A little girl friend had persuaded him to give her money which his mother had given him for purchases of food, and to charge the purchases instead. When this was discovered, the girl denied all complicity. His shock at her perfidy caused him to develop a dread of any transaction involving money. This disguised fear led to a lifetime of difficulty.

Many disguised fears, as in this instance, are "hold-overs" from infancy or early childhood. This is particularly true where hidden fears originate before the child has learned to talk well enough to express them in words.

Most of us dread certain things. If our feeling is the result of a simple fear, we can easily find what it is and correct it; but if its origin is disguised, we may go through life without understanding it or being able to correct the behavior resulting from it. In most instances we can help ourselves with knowledge in the field of mental health. In other cases we should consult a competent psychiatrist or psychologist, just as we would consult a physician for a physical ailment.

Worry is chronic fear. Fear is anticipated pain, physical or mental. Worry is fear that has become chronic, persistent, or continuous. An individual's mind is not healthy when he allows fears to progress to the point of constant emotional disturbance.

When we are emotionally overwrought we are subject to depressed feelings. It is then that we worry, and a vicious cycle starts, with each fear begetting new fears. Fatigue makes us more susceptible because it interferes with normal thinking. Therefore the remedy for worry is rest and, beyond this, to locate and resolve the fears involved.

To feel inferior is unnecessary. The term "inferiority
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complex" through constant misuse has fallen into disrepute. A more accurate description of this mind problem is "feelings of inadequacy." We feel inadequate more often than we are willing to admit.

This is the case when one does not measure up to standards he has set for himself. Many persons who suffer thus have pictured themselves as leaders and are unwilling to take second place. This condition disappears when a person analyzes the situation and measures himself against his own known ability. The individual often does not know his own limitations and therefore creates his own feelings of inadequacy by attempting to do something in the face of certain defeat.

Why do so many students in college lack confidence in themselves? If a student feels inadequate in a class, usually this is due to lack of preparation or to inattention. Possibly the student may have set a goal for himself too high for his ability to attain, or he does not have adequate background for the work, or something in his early conditioning has dulled his ability to work effectively. In any case, self-appraisal based on good mental hygiene will solve the problem.

To feel uncertain is to feel insecure. Is there any worse feeling than not to be sure which way to turn? "One half of me says yes and one half of me says no" are words of a song which expresses this feeling of uncertainty. A chronic state of fear regarding the way things are going to turn out is devastating to the mind. One never feels secure when he is in a constant state of indecision.

Life and change are practically synonymous. When an individual chronically feels insecure, the fault lies in his inability to adjust his changing personality to his changing environment. He must change his sights if he is to hit the moving object which is life. A feeling of cer-

tainty comes from competence in doing the thing one wants to do. The individual feels secure when he achieves the art of associating normally with other people and has learned to manage his own affairs within the range of his own ability.

Ignorance and superstition have bases in fear. The two strongest allies of fear are ignorance and superstition. Primitive peoples are afraid of eclipses because they do not know what eclipses are. Those of us who understand this phenomenon have no fear of it. Fears of common diseases and other fears of like kind have vanished with the coming of true knowledge.

Superstition favors fear because it puts a premium on ignorance. We frequently fear things because we do not understand them. Superstition has caused people to be afraid even to investigate. History shows that progress has been made only when someone has been willing to run the hazard of investigation, which generally shows the fear explored to be groundless. Education eliminates ignorance and in turn superstition vanishes.

Our reactions toward phenomena of a physical nature are fairly satisfactory, but we are today still profoundly ignorant of the laws governing human behavior. This ignorance causes many fears and superstitions which in turn cause just as much mental disturbance as did our former dread of the phenomena of nature. The emotions are mischief-makers in these situations.

Conscience is a fear symptom. Many fears parade under the guise of what we call "conscience." As far as can be discovered, conscience operates largely as the fear of displeasing others and thereby losing their affection and respect. It is an individual's sense of right and wrong, partly inherited, partly acquired from his social environment. Such fears take the form of a sense of guilt or sin,

and they are the most intense and persistent that the individual can suffer. The degree of suffering is rarely in proportion to the wrongdoing of the victim. Hardened gangsters suffer few pangs of conscience. On the other hand, a young person who accepts a drink of liquor after promising to refrain may suffer untold agony because of having violated his promise. Conscience for the most part brings suffering only to sensitive persons. Mental hygiene will aid them in making their adjustments.

To be conscience-stricken is to have an emotional reaction of shame or remorse for violating an ethical or accepted principle. Sound mental health sees conscience as reasonable to the individual, but maintains mind control over its emotional or impulsive reactions.

Worries and attitudes caused by conscience require analysis. The starting point of such an analysis is to ascertain whether the situation is reasonably wrong or is simply a fear that it may be considered wrong by others.

Wish-thinking is a dangerous pastime. Wishing in many instances takes the place of thinking and often is considered to be thinking. In wish-thinking we defend our weaknesses or try to give defeat the semblance of victory, or we achieve in phantasy what is unobtainable otherwise. Thus wish-thinking has its basis in a fear to face facts or in an unsatisfied desire.

One can wish so strongly for a thing to happen that it seems, in the mind of the wisher, actually to have occurred. For example, a young woman reported several times that while walking in the dark she had been pursued by men. After a number of these reports her father suspected a phobia and asked the family physician to investigate. Under careful questioning she revealed that she felt she was not so attractive as other girls and that she wanted the attention of men more than anything else. She finally

admitted that probably she wished so strongly to be pursued that she really thought it was true. Wishful thinking could not solve her problem. Its solution lay in achieving wholesome mental health by recognizing the true situation.

Young fellows sometimes wish for automobiles so much that they borrow cars without the owners' knowledge. Students sometimes wish for good grades so hard that they fulfill their wishes by unfair means, in some instances by cheating. When wishing is carried to the extreme, the ego becomes inflated, which causes selfishness to be placed above good adjustment. Spoiled young people, for the most part, are the victims of various forms of wish-thinking. Sometimes they actually wish they were ill because they like to have the attention and sympathy which attends sickness.

Wishful thinking often is motivated by the desire to escape from difficulties. Everyday life is replete with examples of this type of escape mechanism, which often distorts the facts altogether and makes it difficult for the victim to get back to reality. Good mental health does not confuse fact with fiction.

Day- and night-dreaming stem from wishing and fearing. Everyone knows what daydreaming is. In itself it is not necessarily a bad thing, but constant mental withdrawal from action may carry one in time to the point where he loses control and becomes "peculiar."

We say to ourselves, "This is what I should have said" or "This is what I should have done." We daydream about how splendid we could have been and probably spend much time in imagining what we will do "the next time."

Almost any mental activity is better than none, but constructive mental work is needed by men and women of

action, who indulge in daydreams only to a small and controlled extent. To daydream about a situation is futile unless it is followed by action.

George K. Pratt writes:

“Contrary to widespread opinion, daydreaming is not caused by ‘laziness’; nor is it due, as some irritated observers would have us believe, to ‘sheer cussedness.’ Instead, excessive daydreaming of the type that eventually causes failure is almost invariably associated with a feeling of inferiority (whether justified by the facts or not) and has its origin in a personality marked by over-sensitiveness and timidity. Such a personality shrinks from participating in the rebuffs and the rivalries and the give-and-take of the everyday world; and, to compensate itself for the harshness of a factual environment, retreats to the rose-colored warmth of an imaginary one.” (8)

In our daydreams wishing plays a strong rôle and it is not difficult to get ourselves into “air-castle” building. Sigmund Freud, the foremost scholar on dreams, has reduced them more or less to a status of the expression of unfulfilled wishes. There is much evidence to indicate that night dreams cannot be formulated so simply. There is evidence, also, that one cannot predict future events by night dreams any more than he can by daydreams. Both may be indicative of the kind of personality one possesses. An over-anxious person may do a great deal of both kinds of dreaming. Both probably are wish-fulfillment anxieties at the base.

Frustration makes us aggressive. A fear of not achieving a goal or an immediate objective often causes one to feel frustrated — that is, blocked or thwarted. Frustration is closely associated with both fear and its opposite

primary emotion, anger. A recent study of this mental hazard made by psychologists at Yale found that:

"Aggression is always a consequence of frustration. More specifically the proposition is that the occurrence of aggressive behavior always presupposes the existence of frustration and, contrariwise, that the existence of frustration always leads to some form of aggression." (3)

When one feels aggressive, the primary emotion of anger is in operation, because anger is associated with fighting, or aggressive behavior. The physiological reaction to anger is similar to the reaction to fear except that with anger the sugar which enters the blood stream prepares the body for *fight* rather than for *flight*, as in the case of fear. Therefore the antidote for both fear and anger is some form of exercise. The physical and emotional tension is released by taking action — by doing something.

In the way such action is controlled lies good mental health. Some physical outlets are walking, swimming, tennis, or other sport, or some form of manual work. It is also well established that mental activity which is completely absorbing will release tension. Action is the great solvent of mood.

Put fear in its proper place. John J. B. Morgan says:

"Fear is one of the most important emotions that we have. In its place it is a valuable response. Out of place it is most destructive. Since today most fears are out of place, their mastery is extremely important." (6)

Fear in its place may be useful, if it leads to caution and forethought or stimulates one to intelligent action. On the other hand, when fears cause one to make unwise decisions, they may be very upsetting.

To keep fear which is "out of place" from becoming pathological, one must bring about an immediate adjustment to the situation. Courage and a will to firmness often dispel fear. If one decides to escape rather than to meet and overcome his fear immediately, it is wise to make this only a strategic retreat to the point where forces can again be organized — in other words, to be cautious.

In everyday life, fear is the motive behind various forms of escaping from reality. The student who postpones writing a paper may be basically afraid of the assignment. He may feel inadequate in this situation, and here we see a mild form of running away.

We live in a world which, in large part, is of our own creation, and we must guard against constructing any part of it too far from reality.

Acquiring knowledge about mental health

E. Van Norman Emery has evolved a definition for mental hygiene which is all inclusive. We state it as follows:

"Mental hygiene is a movement, a discipline, an ideal arising from the facts of human behavior and aiming to bring about relative harmony among the divergent forces within the individual, in order that the most constructive relationship possible will develop between the individual and the social group."

As we look at this accepted definition we see that this discipline is effective only when self-imposed. We realize also that mental hygiene aims to bring harmony among the forces within the individual and between these and the environmental forces outside of himself. Here we have the complete picture.

No one now denies the close relationship that exists

between body and mind. The emotions have been shown to stimulate the glands of internal secretion. These secretions affect bodily reactions and in turn influence the sensory functions of the mind. From this we know that the mind is more than the intellect alone.

One of the troublesome characteristics of the mind is that ideas may become fixed through both physiological and psychological processes. These fixations may be either temporary or permanent, depending upon the individual's ability to recognize them and his will to change them.

We do not go around looking into people's brains, but it is well to know that the cells and neurons of the brain constitute the physical functions of the mind. The mind represents consciousness. Everything that happens to one is recorded in the brain by actual physical changes and is recalled by the association process.

The phenomenon known as the "subconscious mind" plays a big part in our mental health. For example, our behavior may be affected very definitely by some seemingly forgotten experience stored in the subconscious mind.

The normal mind functions as a whole, and unity, wholeness, and wholesomeness are its characteristics. The degree of adjustment of the individual to himself and to his environment measures the normality of his mind.

The mind under stress of fear does not behave normally but suffers anger, worry, frustration, feelings of inadequacy and uncertainty, ignorance and superstition, misplaced conscience, wish-thinking, and dreaming. These are symptoms of different kinds of mind disturbances that affect mental health.

There are certain things one needs to know and put into action in order to achieve sound mental health. Morgan,

in his book, *Keeping a Sound Mind*, summarizes the requirements when he says:

“You may get an answer to this question by determining whether you are happy, whether you have a broad perspective of life, whether you have developed your body into a machine which is capable of doing your bidding, whether you enjoy the challenge of life’s various problems, the nature of the goal toward which you are working, the degree of urge you have to attain that goal, and the degree to which you are able to get along with other people.” (5)

Mental hygiene may effect a solution of the many problems of human life and modern society. Just as physical hygiene has done much to protect the body from pain and disease, so mental hygiene, carrying on the crusade for man’s happiness, will lead to greater understanding and strength and courage in the mental life. Together, mental and physical hygiene point the way to wholesome personality development in everyone. They lead ultimately to a great society in which anger, fear, and mental disease will be at a minimum and the balanced mind will be at the helm.

SUGGESTED FURTHER READINGS ON THE SUBJECT OF MENTAL HEALTH

- I. BEERS, CLIFFORD WHITTINGHAM. *A Mind That Found Itself*. Doubleday, Doran & Co., Inc., New York; 1931. It is doubtful if anyone could read this book of 395 pages and not be impressed by it. It is a mental-hygiene classic. The author says: “It is an autobiography, and more: in part it is a biography; for, in telling the story of my life, I must relate the history of another self — a self which was dominant from my twenty-fourth to my twenty-sixth year.”

2. CANNON, WALTER B. *Bodily Changes in Pain, Hunger, Fear, and Rage*. D. Appleton-Century Company, Inc., New York; 1927. Page 4.

This book of 311 pages represents the best authority in this field. The discussion of the physiological effects of emotional disturbances is reliable and non-technical.

3. DOLLARD, JOHN, et al. *Frustration and Aggression*. Yale University Press, New Haven; 1939. Page 1.

This book of 200 pages is the product of coöperative research on the part of eight workers in the field of human relations. It contains valuable information and is not difficult reading. In these unsettled days it is most essential to realize that aggression can be either an individual or a group reaction to frustration.

4. HOWARD, FRANK E., and PATRY, FREDERICK L. *Mental Health*. Harper & Brothers, New York; 1935. Page 543.

Here is a book of 450 pages of non-technical material on the subject of mental health. It is an authoritative and comprehensive treatment of the relatively new subject of mental hygiene.

5. MORGAN, JOHN J. B. *Keeping a Sound Mind*. The Macmillan Company, New York; 1934. Pages 26-27.

This 400-page book gives a clear presentation of mental-hygiene problems. It is constructive in its approach and shows the reader how to keep a sound mind.

6. MORGAN, JOHN J. B. *The Psychology of Abnormal People*. Longmans, Green & Co., New York; 1940. Page 246.

See annotation at end of Chapter 8 (page 202).

7. OVERSTREET, H. A. *About Ourselves*. W. W. Norton & Co., Inc., New York; 1927. Pages 56, 38.

This interesting book of 291 pages is easy to read and is psychologically sound. Through it we can take a look at ourselves as we turn "Towards Unreality" and "Towards Reality."

8. PRATT, GEORGE K. "Day-Dreamers and Bluffers" from *Why Men Fail*. D. Appleton-Century Company, Inc., New York; 1928. Page 169.

Mind at the Helm

This is a 25-page chapter of the book, *Why Men Fail*. Each chapter is written by an eminent authority. The entire book provides excellent reading.

9. SADLER, WILLIAM S. *The Mind at Mischief*. Funk & Wagnalls Company, New York; 1934. Pages 364, 119.
In this book of 400 pages the author discusses tricks and deceptions of the subconscious mind and how to cope with them. The book is filled with live experiences from Sadler's medical practice. It is enjoyable and profitable reading for college students and teachers.
10. TROLAND, LEONARD T. *The Mystery of Mind*. D. Van Nostrand Company, Inc., New York; 1929. Page 23.
This book of 253 pages is not easy reading, but it is strikingly clear. It is intended for the reader who has not made a study of modern psychology, and provides excellent background for the study of mental hygiene.

Other useful books in this field are:

- ADLER, ALFRED. *Understanding Human Nature*. Greenberg, Publisher, Inc., New York; 1927.
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Chapter

II

SEX INTERESTS AND MARRIAGE

"If men and women are to understand each other, to enter into each other's nature with mutual sympathy, and to become capable of genuine comradeship, the foundation must be laid in youth." HAVELOCK ELLIS

THE word "sex," like other words, takes its meaning from the way it is used. If the title of this chapter were "Sex Population Statistics," few of us would be interested. An English teacher's question whether the gender of a noun is masculine or feminine arouses no particular emotion, nor does an article on "The Sex Life of the Amoeba" create much stir. But a report on the sex life of almost any person calls forth at once our emotional attitudes regarding sex.

The manner in which we express sex interests is governed largely by the way we were conditioned in childhood, by the environment in which we grew up. One who has been reared in a puritanical home and who has had most of his associations with those who never discuss the subject of sex may well act as though it were a mystery. The child who hears and repeats a vulgar sex term is told immediately: "Hush; that isn't nice. Let's not ever say that again." Such an admonition engenders early ideas of mystery and shame.

Psychologists reporting on early habits in child life are agreed that failure to use correct terminology and to answer questions directly and without emotion are fundamental causes of the great amount of mystery and taboo in sex knowledge. Childish sex curiosity is natural. Sex experiences of one kind or another are the rule rather than the exception. Yet a child who is normal in this respect may feel that he is different from other children, wicked and sinful. Early attitudes of shame concerning sex information have caused disharmonies and maladjustments in many personalities.

Because of their early training, the great majority of people consider discussion of sex bad taste. Most children receive unreliable information on this subject early in their lives. For this reason it is difficult for them to understand and discuss human relations in this field. Scientific concepts in the field of sex hygiene are remote from their own personal living.

It is not uncommon for college students to feel shy about their own lack of sex knowledge. The other extreme also is seen in college — the “sophisticated” young person who knows all about sex. The individual who has lived in a situation presenting a happy mean between these two extremes presents, in his language, attitude, and conduct, a better personality balance.

Background for sex instruction

It is to the younger generation that we must look for most of the changes that will advance society. College study offers opportunity for the student to reappraise old beliefs and taboos and to recast his understanding of the important rôle which sex inevitably plays in his life.

Conventions are necessary. Sex is probably the most powerful instinct we possess, and the most dynamic moti-

vation in our lives. In our civilization there are codes to govern the social and individual relationships involving sex. In these matters the rules and conventions are definite and clear, and everyone must "play the game" according to the rules. Society may change its own regulations gradually and from time to time as better ways appear, but the individual is penalized if he interprets their meaning to suit himself. Only in intelligent conformity is successful adjustment to be found.

A persistent form of idiocy has maintained that one must be either sexless or a rake. There can be no satisfactory answer to the problem of successful adjustment to life if either of these extremes is chosen. What is needed is a correct understanding of normal, rational, and well-adjusted sex life.

Healthy and unhealthy ideas. We can best judge our ideas on sex by critical analysis of some unhealthy ideas. The late Frankwood E. Williams, of the National Committee for Mental Hygiene, commented very interestingly on this point:

"The boy is taught, in the first place, that matters of sex are degrading, wrong, and sinful (at least for him and probably a little bit for everybody), but this teaching being not altogether successful, we further try to 'protect' him by creating in him an attitude toward women that we think will make him 'safe.' We teach him that in his consideration of women, he must keep in mind his mother and sister; that he must not say or think or act in any way with another woman that he would not say, think, or act with his mother or sister, or want them to know about.

"These are frightfully unhealthy ideas. Tremendous damage is done by them. . . .

“While it is perfectly right to point out to boys that under certain circumstances women must be carefully guarded and protected, it is wrong to put into their adolescent minds at the critical time when they are normally, healthfully approaching the development of their hetero-sexuality that women must not be thought of in any way except as they would think of their mothers and sisters.

“This is one of the chief causes for the failure of the establishment of hetero-sexuality on the part of the boy which interferes later with his married life, which drives him to prostitution, which drives him to abnormal sex expression and to those twists and quirks of personality and character that go deep in his life and fundamentally change and frequently ruin it.” (7)

This would seem to indicate that the background for sex instruction often has been so ignorantly laid that healthy ideas are hard to implant.

To keep an open mind is essential. No one questions how vitally positive and enriching an intelligent attitude toward sex knowledge can be. With the increasing availability of more scientific data, the student can assimilate these new facts and organize the rest of his knowledge into a tentative philosophy of life, animated by the best interpretations which his college study can give him. This means adequate synthesis — that is, combining facts, not mere browsing. Here is the opportunity to approach the whole problem in a constructive and open-minded manner.

The depth and breadth of psychological experience tied up with sex is enormous, and we should be careful about making snap judgments based upon the belief that we know it all or because we have had some experience.

The older generation is becoming less dogmatic in matters of sex. In the intellectual sphere, age has a decided advantage over youth. Because sex is primarily emotional, the intellect is required for balance.

College age is a period of great intellectual and emotional significance. The college has a grave responsibility. It should fix in students' minds the social need for serving the advancement of human welfare rather than catering to self-indulgence. No one should leave college looking upon sex as a detached and minor interest in his life.

But what is the attitude of the college in this field? College deans of men and women daily face the fact that students want to know how to live while they are in college as unmarried adults. These advisers see the whole matter of sex information in its broader aspects of living. Many of them have had long experience in helping generations of students to make their adjustments. Yet students say that many college advisers do not disseminate the facts they need, and that there is an amazing amount of misinformation and boasting about sex in dormitory room conversations.

History is full of the evolutionary emancipation of people from slavery to tradition or custom. Recognized authorities admit that there is a cultural lag in the field of sex hygiene. Harry Elmer Barnes comments that modern man demands scientific knowledge and technical precision for his motorcar, but for decisions on the behavior of the occupants of the car he turns back to the folkways of ancient people.

We may be scientific in our business but primitive and superstitious in our fears. Fear, when controlled and directed, has a social value, but uncontrolled fear of sex does not promote desirable adjustment. It often ends in disaster both for the individual and for society. It is

likely to bring about behavior that is biologically and socially undesirable.

Nowhere does man show greater inconsistency than in his attitude toward sex. To some it is unspeakable; others think of it as pleasure and pastime; while still others regard it as a great responsibility and as the driving power behind their highest ideals and impulses.

Characteristics present in sex behavior

It is important that we gain the first great concept; namely, that all life perpetuates itself through the process of reproduction. Nature has seen to this. When a boy begins to preen himself to appear well in the eyes of a girl, this is natural behavior. Likewise, the girl dresses and applies beauty treatment to attract the boy. This is nature's way of bringing them together.

There are now so many well-written biologies covering the fields of sex and reproduction that no student need be ignorant of the full mating story of all living creatures, from lower animals to human beings.

Physical aspects. Certain physical functions characterize sex in all of us. First, the age of pubescence is that period of life at which the reproductive organs mature and become operative. In boys the age ranges from eleven to seventeen, with an average age of fourteen. For girls it is found that the range is from ten to sixteen, the average age being thirteen. Girls usually mature physically earlier than boys.

Second, the glandular system plays a definite rôle in the physiological changes that take place in the body. The sex glands, the testes and ovaries, serve dual purposes. They produce reproductive bodies, the eggs and sperms, which perform functions apart from the body itself. But in addition, in both the male and the female,

the sex glands produce several hormones. A hormone is a specific chemical substance which, on passing into the circulatory fluid, modifies structures or functions of various parts of the body. These hormones guide the general physical development which gives men the typical masculine appearance and women the typical feminine appearance. They also have a strong effect in determining other physical characteristics of the individual. Temperamental differences between men and women also may be due to hormones, but the extent to which these differences are due to social conditioning has never been accurately determined.

Just as individuals vary in other forms of temperament in their personalities, so do they vary in sex temperament. Individuals range from the weakly sexed to the strongly sexed. Full physical growth of the body is not reached at pubescence. This physical maturity occurs nearer college age. However, not all individuals who are sexually mature are as yet emotionally mature, and emotional maturity is essential to the welfare of the sexually mature. Just why so many persons behave as adults in most ways and yet regress to the infantile in sex relations is not easy to explain.

Certain distinguishable phases of sex life. There are some phases in each person's sex life that may be described as stages of development. Laurance F. Shaffer states them well when he says:

"The love and sex life of the individual goes through a number of distinguishable phases. The earliest phase is a short-lived one in early infancy, of pure bodily pleasure. A second phase centers around parent-attachments, being achieved by the process of love conditioning. . . . In later childhood the wider range of activity of the indi-

vidual usually causes a weakening of the parental love ties, resulting in a relatively nonsexual period. Finally, in adolescence and adulthood, sexual attachments are normally made to unrelated persons of the opposite sex." (4)

The relatively nonsexual period of which Shaffer speaks has a stage that is spoken of as "autoerotic," or inclined to self sex gratification. This is the stage of self-love which classicists called "narcissism," from Narcissus, a character in Greek mythology who fell in love with his own image in a pool. The young child centers his whole world in "I." This normal phase of development leads to exploration of the body and to many questions about it: Suppression of questions by parents during the autoerotic growth phase often results in the child's becoming secretive about any pleasant sensation that may be discovered.

The repetition of an autoerotic or self-stimulating practice may easily form a habit. Psychologists have pointed out that an autoerotic habit should be looked upon as a fumbling attempt to adjust or control sex tension. Only when the practice persists through adolescence to maturity may it be considered a sexual defect in an individual's personality. Medical science has established that autoerotic practice does not cause physical and nervous disturbances, such as loss of sexual power, sterility, skin blemishes, or insanity. However, the individual with a persistent autoerotic habit may suffer feelings of anxiety, shame, guilt, or inferiority. Autoeroticism belongs to the period of childhood. Forsaking childish ways is essential to mature adult sex behavior.

The final stage of development is normal interest in and attraction to members of the opposite sex. This is known as "heterosexuality." It is the phase in which

the great majority of people continue their sex life. We describe all relationships between men and women as heterosexual.

There is another and greatly misunderstood phase of sex life; namely, homosexuality. The Greek word "homoiias" means "the same," and "homosexual" describes persons who have an attraction for or toward individuals of their own sex. In childhood most persons are homosexual, as, for example, hero worship in a boy and school-girl "crushes" on women teachers. Also we see intense, healthy personal friendships between two boys or two girls. In adult life it is usual for women to live together in normal, healthy associations; and close, wholesome friendships between men are traditional. John Rathbone Oliver, of the medical school at Johns Hopkins University, says:

"As a matter of fact, most of us live a 'homoerotic' [homosexual] life. We spend most of our time with members of our own sex. . . . If there were not a marked homoerotic element in all of us males, there would be no clubs, no secret orders, no Y.M.C.A.'s, etc. If women lacked this same element, they would be impelled to make all their social contacts with men. And as you know, a woman who has no intimate friends of her own sex is an anomaly, and is often criticized as a man-hunter." (2)

The extreme type of homosexuality that is completely taboo and against which stringent laws are enacted is that where men, with sex relation intent, deliberately seek young boys as their associates.

It becomes apparent that the homosexual phase of sex conduct must not exhibit itself to an abnormal degree when the normal expected standard is heterosexual. As we have noted, the same is true for the autoerotic phase.

Psychiatrists and psychologists agree, from study and observation, that all persons carry in themselves the possibilities for each successive type of sexual expression: autoerotic, homosexual, and heterosexual. These are processes in the normal development of every individual. Any arrest which may develop along the line is abnormal.

Masculinity and femininity considerations. Terman and Miles, in their book, *Sex and Personality*, have reported facts which indicate that, in interests, no man is 100 per cent male and no woman 100 per cent female. We quote from the study one of the interpretations and conclusions:

“Among the hardest errors to eliminate are those that arise from traditional biases, such as the notion that the masculine temperament nearly always goes with a particular type of voice, physique, carriage, manner of dress, or occupation. . . .

“It is necessary to go back of behavior to the individual’s attitudes, interests, information, and thought trends, which constitute the real personality behind the front presented to his fellows.” (6)

Realization that men have many traits in common with women and that women have personality traits in common with men results in better understanding of heterosexual relations in personality adjustment.

Personality balance is the solution. Students who know something about personality development will not leave the complex matter of sex adjustment to chance. We know that maladjusted sex relationships constitute one of the greatest causes of unhappiness. Wisdom points the need for a healthy consideration of all aspects of sex and marriage, in order to develop habitual normal attitudes. This goal certainly is attainable.

The pre-marriage period

"Why don't you stop beating about the bush?" asked a freshman spokesman for a class in sex hygiene. "What we want to know is how to live our sex life right now, not how it should be lived after marriage." This student raised a perfectly fair question and one that most college students ask at some time or other.

Some of the problems. One approach to the subject of sex hygiene has been through the discussion of the consequences of illicit sex relations. Practically every student has been informed by the family physician, school health officer, or his parents, or through reading, about the dangers to health which arise from venereal diseases. In communities where there is lack of medical inspection and hygienic control, health officers reliably report that 70 per cent of all prostitutes have either gonorrhea or syphilis. A physician of long experience in professional life briefly summarized illicit relationships with casual pickups or prostitutes as an exposure to "dirtiness." Of course he referred to the low level of physical hygiene of these women rather than their mental attitudes.

The whole matter of physical hygiene in regard to illicit sex activities should be discussed with a competent and professionally accepted medical practitioner. The physician is a realist, trained to face the problem in a matter-of-fact way; he is interested in preventing and curing disease, not in moralizing on the virtues of chastity or the contumacy of sin. Any individual who becomes exposed to a venereal disease owes it to himself and to society to seek immediate and proper treatment from a medical health center or a competent physician. "Quack" doctors and unethical druggists are almost as serious a menace socially and hygienically as are prostitutes. Ignorant

and frightened college students too often are their prey. Many a young person's health has been ruined, many a precious life has been lost, many a purse has been drained, by these unscrupulous practitioners.

Daydreaming and phantasy. Romantic daydreams are common to everyone. The danger here may lie in overdoing them; sometimes it lies in the character of the daydreams themselves. Daydreams which consist of low types of sexual imagining may be very harmful.

If a person finds that this type of daydreaming or fanciful imagining is developing, it is imperative that he avoid sensational novels and other crude sexual stimulation. It is important to dislodge extreme romantic imaginings or unworthy thoughts by seeking wholesome acquaintance and normal friendship with persons of the opposite sex.

The fallacy of trial marriage. Psychiatrists find that men who fear marriage usually are emotionally immature. Most advocates of trial marriage are men. Numbers of cases now on record consistently prove that such arrangements are psychologically impossible for most women. An article in the *Forum* for November, 1930, entitled "We Tried Trial Marriage," states:

"We lost the freedom of the single without achieving the freedom of the married."

Logan Clendening, a seasoned physician and medical writer, says:

"Plans for reconstruction of marriage and morality have been found inadequate. They expose young people to half-baked, untried philosophies of conduct."

Judge Ben Lindsey's theories on "companionate marriage" faced insuperable practical difficulties. It was inevitable that the parties to the arrangement should have

to live with other people in a society whose social customs require certain conventions for the unmarried and others for the married.

Complications of free love. Free love, as a sexual "way out," actually is a myth in our society. Donald McLean, of the Institute of Family Relations in Los Angeles, author of a sound little pamphlet entitled "Women and Extra-Marital Relationships," in which he uses material from the Institute's broad clinical experience, concludes that:

"A theory must be tested before it can be recommended for adoption. And this fairy tale of free love has been abundantly tested. . . . After the first passionate weeks, the lover becomes more man and less romantic hero. . . . When conflict arises, the woman begins to see her lover's imperfections. . . . She feels insecure and tries to become possessive. If she is naïve and a novice, she is inevitably deserted. . . . The human race, by trial and error, have found that man and woman cannot be welded together by mere instinct; instinct without responsibility to society is not enough. . . . The woman inherits socially the desire for security in love. . . . Almost every woman finally has to admit that she hopes to make a satisfactory lover a permanent mate. . . . The man inherits socially a double code, which he may deny in words, but follows in practice. . . . But since she is illicit, extra-legal, he feels no very deep responsibility for her."

It is well recognized that, for women, sex tension is a lesser problem than for men, but that illicit sex relations have much more serious psychological consequences. Margaret Culkin Banning, in an article entitled "The Case for Chastity," in *The Reader's Digest* for August, 1937, stated:

“Here is the conclusion of one young woman who went through an extra-marital experience: Much is talked of the evils of frustration in the case of the woman who denies herself the physical expression of love. In my opinion that vague and generally periodic torment is as nothing compared to the frustration suffered by the woman who seeks happiness in love outside of marriage. With all the latent instincts of her sex released and intensified by the mating experience, awake for the first time in her life to the full design of married love, she realizes with a sense of dumb defeat that for her the fulfillment of that design must remain, perhaps forever, an unaccomplished thing. It is a trapped, blind-alley feeling that only one who has experienced it can appreciate. The conflict set up as a result casts its dark shadow over an experience which one had expected to be all light and freedom.”

Promiscuous sex relations before marriage are known to be a cause of jealousy after marriage. Each partner may suffer the torments of jealousy, with resultant psychological reactions and maladjustment in marriage, because each knows the other is an experimenter.

Sex adjustment a personal achievement

In any group of young people individuals will be found who have had a wholesome childhood and who, consequently, have high standards of personality adjustment. There are others who, having been hurt or disturbed in their emotional development, consequently are obsessed by sexual ideas. These usually are the individuals who tell “smutty” stories or who compensate for inadequacies by acting sophisticated.

Actually, the student formulates decisions in regard to

sex and resolves the inevitable sexual conflicts of adolescent and later life in terms of his fundamental personality traits, whose origins are in the standards of life developed in early childhood. Howard and Patry, in their book, *Mental Health*, reached the following conclusion:

“Wholesome sex adjustment is a personal achievement and not something which can be communicated through information as we instruct in the principles of physical hygiene. Information given at the proper age level in an impersonal but understandable way as facts of science does assist in but does not insure attaining a successful and happy sex life.” (1)

Knowledge of the facts about sex is no guarantee of a happy adjustment for any individual. The personality that one has inherited and developed is the important factor in handling these facts. From our study of personality and mental health in preceding chapters we realize that individuals can develop control of their own personalities once they know themselves. What is needed is the will to do this.

We need to examine carefully our own attitudes. Do we seek counsel in order that we may develop intelligently the sex side of our personality? Or do we merely want our own ideas and wishes approved? Sound advice is hard to follow.

We already know that there are great differences, both physiological and psychological, between individual men and between one woman and another. The differences between men and women as sexes complicate the field even more. With these factors in our problem, it becomes evident that no authority, no matter how expert he may be, can outline a standard practice. No single formula

can cover sex conduct for all unmarried persons. A competent adviser, however, can do much for the individual, because he can consider that particular person's personality characteristics, mental health, attitudes, and emotional adjustment.

Today students can work out their own philosophies much better than could those of a generation ago. Many good books are now available. One does not necessarily need a course in sex hygiene as such, except those excellent ones now being offered on marriage. Courses in chemistry, biology, psychology, anthropology, sociology, and economics all offer basic information regarding sex and its influence on society. To place undue emphasis on sex conduct separate from other personality behavior is to overload a trait in personality that is already highly charged with emotion.

In the social sciences, one learns the effects of sex taboos and how powerful they have been over a long period of time. With this knowledge the student can interpret their effects on our present society. He can then understand that it is impossible to set down, one point after another, a comprehensive statement designed to cover the standards of sex living for the pre-marriage age — admittedly the most difficult one in sex adjustment.

Many students argue that the biological urge is the same for an unmarried adult as it is for a married adult and that, therefore, the unmarried person should have access to the same information. Others argue that the physiological demand for sex gratification parallels the demand for food when one is hungry.

Bodily demands for extra-marital sex gratification are not comparable with bodily needs for food. Continence is not physically harmful. Nature has prepared the body to take care of sex tensions automatically. Many celibate

persons live successful, socially hygienic lives without physical ill effects. The case of a South American boy who attended high school in this country illustrates this point. His father wrote to the head of the school requesting that arrangements be made for his son to have periodic sex relations for the good of his health. The headmaster replied that, so far as he could ascertain from the most reliable medical sources, this was not necessary. He pointed out that possible exposure to venereal disease with a prostitute was certainly a needless risk, and that any other arrangement might result in psychological maladjustment. He suggested a program of physical activity as a means of releasing sex tension and advised that the boy remain continent until such time as he should marry. Two years later the father stated that he was glad this counsel had been followed for his son, but that it was a new idea to him, because he had been brought up to believe that nature did not equip man to guard his health in the way explained.

From the age of puberty to the time of marriage is a period that should be used in preparation for marriage. Such questions as, "What should I know about the biological, physiological, and psychological aspects of sex life? the differences between sexual and emotional maturity? human reproduction, and the part that sex plays in the life circle?" or, "What should be my attitude toward dating? petting? pre-marital relationships? choice of mate?" and so on, will be answered by each individual for himself or herself after serious self-study of the problem. The mere fact that we are free to discuss the problem suggests the possibility of a solution. Such discussion is natural, and is not unholy. Its objective is to enable the individual to attain the married status without being unhappily scarred physically, mentally, or emotionally.

Marriage

Marriage is not the whole objective of life; it is part of life, and the better both parties are able to adjust to it, the smoother will all other aspects of living operate. Nor is the sexual act the whole of marriage. Though it adds much to marital happiness, it is not essential to compatibility, which is based largely on unselfish give-and-take. When marriage is happy, the objective for that phase of living has been attained.

Many ancient peoples lived under the matriarchal system. The wife was the ruler of the house. She controlled all property and engaged in all the business in connection with it. Classical Greece, however, was a man's world, and decidedly patriarchal. In Europe, marriage followed the Grecian pattern, and we in America inherited this system.

Women of college age do not realize that their grandmothers had few privileges. Not until 1919 did women in this country receive the franchise to vote. About the same time women gained many of the other legal rights they now have. Young women today enjoy a freedom of which their mothers and grandmothers never dreamed.

Marriage, as we know the custom today, has a lengthy sociological and legal background. The trend today is toward greater equality between men and women.

The family is still the unit. President Ray Lyman Wilbur of Stanford University, addressing the 1939 graduating class on the thesis that the family is the anchor which will "hold the human race steady," said:

"Early marriages are important if the family is to be important. Certain fallacious social conceptions that are often prevalent among us need to be reviewed. There is no reason why we should

expect a young man to maintain his bride at the economic level reached by her father in his full maturity. The dowry system, or some modification of it, by which the parents through gifts assisted the young couple, has done much in many parts of the world to hold up the family. Various forms of insurance, including health protection, can and will do much to make early marriages possible. It is good for the family to have simple beginnings. Experience shows that the family is the greatest source of happiness and strength for the human race."

Historically, the family is the predominant social unit. One of the great problems today is the relationship of the family to community life. Recognition of the family as the basic unit of our social structure, on which the community, the state, and the nation are built, is essential to our democratic way of life.

What is love? Shall we try to answer the great question, "What is love?" Human beings have struggled with the causes and effects of love from time immemorial and yet have not developed a science regarding it, although the application of its techniques has long been regarded as an art. Love, defined as "a feeling or sentiment of attachment toward some person," has long been classified as a primary emotion, along with fear and anger. That it does not readily lend itself to intellectual analysis is clear to almost anyone. That it is dynamic is evidenced by the fact that kings have renounced thrones for it.

Walter Lippmann, in his *A Preface to Morals*, quotes Havelock Ellis's description of the art of love as an "exquisitely and variously and harmoniously blended" activity of "all the finer activities of the organism, physical and psychic." Lippmann comments:

"I take this to mean that when a man and woman are successfully in love, their whole activity is energized and victorious. They walk better, their digestion improves, they think more clearly, their secret worries drop away, the world is fresh and interesting, and they can do more than they dreamed that they could do. In love of this kind sexual intimacy is not the dead end of desire as it is in romantic or promiscuous love, but periodic affirmation of the inward delight of desire pervading an active life. Love of this sort can grow: it is not, like youth itself, a moment that comes and is gone and remains only a memory of something which cannot be recovered. It can grow because it has something to grow upon and to grow with; it is not contracted and stale because it has for its object, not the mere relief of physical tension, but all the objects with which the two lovers are concerned. They desire their worlds in each other, and therefore their love is as interesting as their worlds and their worlds are as interesting as their love."

The psychoanalyst speaks of "identification" as an unconscious mental process which causes one person to behave like another. True lovers do not necessarily lose their individual identities, but they do, to a degree, identify themselves with each other.

The desire to mate is not necessarily motivated by love. There is much evidence that mates are sometimes chosen on the basis of physical attractiveness. An attraction of personality traits other than appearance must be present if the attachment is to wear well. Lasting love is a matter of social compatibility and physical attraction plus common interests and ideals.

When two young people meet and feel that they are in

love, the cause may lie in psychological factors as well as in physical attractiveness. For example, Betty and Joe may have many mutually pleasing traits of personality, such as intelligence, good disposition, and sociability. Jane may say to Betty, "What do you see in Joe?" Betty is conscious of Joe's good qualities, but Jane does not know Joe so well; therefore she has only outward appearances to judge by. Or if she does know him well, his good qualities may not be of importance to her, or may be overbalanced by other personality factors which she does not like.

Suppose, however, that Joe is lonesome. He may feel that he is misunderstood by his parents, or his personality may prevent his making friends. Betty is sympathetic with his loneliness and her personality responds in a motherly fashion. Girls have such traits and young men often need mother-love. If these two marry, Betty adopts the rôle of a mother to Joe. This situation, although sometimes successful, is fraught with danger. Betty may tire of her mother-rôle, or Joe may not always feel the need.

A case reported by William Marsten in the November, 1938, *Forum* has direct bearing on the question, "What is love?"

"The man in that case insisted that he must be able to support his wife decently at home before he married her. The girl, as girls so often do, gradually changed her point of view to agree with his. She came to believe that a wife should be supported. But time went on, and the man's salary remained about the same. Then, quite suddenly, the girl married a very wealthy man. Psychologically, her former fiancé was responsible. He had changed her whole concept of marriage. She

had come to think of it not as a love union which was worth any effort or sacrifice to achieve but as a semi-business partnership in which the woman's duty was to run the house and keep up the man's pride and social connections. If this was marriage, she reasoned in her feminine way, why not take the best man she could get for that sort of a husband rôle? She did."

Here we may conclude that love was not present; yet the account leads us to believe that it was potentially present until the man spoiled it. Did he really love the girl? If he did love her, why did he allow his pride or his idea of his own importance to dominate the situation?

Institutes of family relations frequently encounter this kind of situation. In this case the fault lay in the dominance factor in the man's personality. In the marriage plan which he proposed to satisfy his own ego, the home was to be established in his way or there would be no home. A true love would not operate that way. In the thought of what they could do for each other and of the joy they would get from each other's companionship, other matters would appear in their proper proportions. The chances are great that these two people could not have made a success of marriage.

Love is making the deal and marriage is signing the contract. Marriage may contain the fifty-fifty clause, but love does not recognize this part of the deal. It goes all the way either way. Love knows no dominance or submission. It is "all for one and one for all," and lovers intuitively know this.

Readiness for marriage. To be happily married is the ideal and the goal of every normal young person. The right time to marry is a most important decision for college students and all other young persons. Biologically, men

and women are ready for marriage long before they are financially or, probably, emotionally prepared.

It may be surprising to some to learn that early marriages on the whole are on the increase rather than the decrease. In presenting evidence of this, S. J. Holmes, in his book, *Human Genetics and Its Social Import*, points out, however, that the change in marriage ages has no marked effect on birth rates. He reports that 50 to 60 per cent of college graduate women marry; some women's colleges claim 85 per cent. College women tend to marry a little later than women as a whole. The percentage of college graduate men who marry is much higher, since many women choose to remain single in order to follow careers they have prepared for in college.

Lewis M. Terman, in commenting on happiness and age of marriage, says:

"In the middle and upper classes of this country the social pressure against early marriage extends years beyond the minimum age at which marriage is permitted by law. We are inclined to think that the wisdom of much of this pressure is debatable. Our own data afford little evidence that late marriages are happier than early ones." (5)

The college group as a whole and progressively is delaying marriage, chiefly for economic reasons. Most young people not only desire to support themselves but are obliged to do so, since their parents are unable to help them financially.

A second reason why college graduates marry later may be the increased length of time that they are required to remain in school. They mature more slowly because they are not put "on their own" so quickly as are other groups. But by the time a student graduates he is biologically and psychologically ready for marriage, or at

least for becoming serious about it. By this time he has made some study of personality and how it works.

Third, the social life is no longer centered in the home. Young people in college meet more of their contemporaries and delay the selection of life partners. In other words, the play period of the young has been extended.

None of these reasons for delay is biological. Young people are interested in members of the other sex long before they begin to think about choosing their vocations, but self-preservation demands that one be economically ready before considering marriage. For college students, however, this situation is not without its compensation, since college offers solutions for the vocational problem.

Young people rarely in this day are dismissed from college because they marry. Some colleges provide living quarters for married students. A growing number of parents are encouraging early marriage for their sons and daughters when all factors seem favorable.

Choosing a mate. In our culture the young man is expected to select his own prospective wife and to convince her that he is the best possible choice of available husbands. This generally accepted procedure is not without its problems, however.

The first problem is, how do the young man and young woman know that they are in love? This assumes that marriage is based on love. The eugenicist says that couples who desire to marry and to have children should examine both family trees before taking the love matter too seriously. The economist and sociologist insist that economic security must be the prime consideration, that love will take care of itself if two people make a success of their marriage financially and socially. Then there is the psychologist to point out that each personality in the partnership must be able to make the necessary emotional

adjustments. His contention is that happiness is essential for successful marriage, and that those things which bring about happiness for the young woman should balance those factors which bring happiness to the young man. The best guarantee for happy marriage is good health, social adjustment, friendliness, unselfishness, and admiration and respect for one's partner.

It might seem that two young people who possess most of these qualifications and who desire to marry should be free to make their decision to do so. Every young person, however, sooner or later will experience the powerful part his or her family plays in the choice of a mate. Parents have regard for health, heredity, and the economic and social status of prospective sons- or daughters-in-law.

What is needed is the will to secure information on how to choose a mate and, next, the intelligence to apply this knowledge. The marriage partner represents a major factor in a plan of life.

An outstanding handicap in choosing a mate is the fact that most men and women do not know how the other sex thinks. When they meet, each has his or her best foot forward in a natural desire to impress the other. What each should seek to learn is the personal habit-conditioning in the background of the other individual. After two young people are married, the girl often finds to her sorrow that her husband has been wrongly conditioned in habits of coöperation in the household. His mother may have pampered him, with the result that he has never assumed his share of the responsibilities in the home. Likewise, a man may find that the pouting he considered cute in his girl friend is the result of family over-indulgence and is not so sweet to live with.

Just why so many men feel that it is "sissy" to lend a hand in housework is not easy to see. What could be

more companionable than to wash dishes or work in the garden together? The man who thinks that his job is done when he leaves his business is just plain blind. His wife probably would rather have more of him and less of his money.

Men, too, need consideration. The wife cannot expect that, because her mother waited on her hand and foot, her husband should do the same.

A common error of the past was the belief that personalities which are unlike complement one another and thus make each person interesting to the other. Facts have shown that differences in interests drive individuals apart rather than together. Joseph K. Folsom, in his book, *Plan for Marriage*, insists that "like tends to mate with like." He finds that marriages are happier and more successful when husband and wife have similar interests, ideals, and beliefs.

Every young man and woman has some idea of the traits he or she would like to find in a mate. Popenoe and Johnson, in their book, *Applied Eugenics*, quote findings typical of several such studies. A group of men at the California Institute of Technology and a group of women at Columbia listed ideal traits as follows:

"LIST MADE BY MEN

Ideal Wife

1. Intelligence
2. Congeniality and compatibility
3. Health and physique
4. 'Good looks'
5. Homemaking ability
6. Character
7. Education
8. Disposition for motherhood
9. Understanding, fair play, co-
10. Personality [operation]

"LIST MADE BY WOMEN

Ideal Husband

1. Health
2. Character
3. Emotional normality
4. Disposition for fatherhood
5. Intelligence
6. Personality
7. Companionship
8. 'Good provider'
9. Coöperation
10. Social disposition" (3)

If these specifications are met in both sexes, a successful marriage should result.

The chances for marital happiness. Can two individuals know what their chances are for a happy marriage? Until recently few facts were available. Now studies of the causes of unhappy marriages are bringing together data that may be most helpful in predicting possibilities for happy marriages. Fewer women will consult fortune-tellers when scientific information on marriage becomes available.

Practically every large city now has bureaus for advising married people and for furnishing counsel to marriage partners. These advisers may not be right always, but they are not just guessing. They have gathered many facts based on large numbers of marriages and divorces.

Lewis M. Terman gave questionnaires to 792 married couples. The results are cautiously and carefully reported in an outstanding study, *Psychological Factors in Marital Happiness*. Terman says:

“The marital happiness score which was computed for each subject was based upon information regarding communality of interests, average amount of agreement or disagreement between spouses in 10 different fields, customary methods of settling disagreements, regret of marriage, choice of spouse if life were to be lived over, contemplation of separation or divorce, subjective estimates of happiness, direct admission of unhappiness, and a complaint score based upon domestic grievances checked in a long list presented.” (5)

The study emphasizes the importance of personality factors in each person as being the ultimate basis for judgment. Background factors such as “family income, occupation, presence or absence of children, amount of religious

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training, birth order, number of opposite sex siblings, adolescent popularity, and spouse differences in age and schooling," hold practically no significance in judging whether a marriage will be happy or not. Contrary to general opinion, one married partner may be happy even when the other is unhappy. Terman found:

"The 10 background circumstances most predictive of marital happiness are:

1. Superior happiness of parents.
2. Childhood happiness.
3. Lack of conflict with mother.
4. Home discipline that was firm, not harsh.
5. Strong attachment to mother.
6. Strong attachment to father.
7. Lack of conflict with father.
8. Parental frankness about matters of sex.
9. Infrequency and mildness of childhood punishment.
10. Pre-marital attitude toward sex that was free from disgust or aversion.

"The subject who 'passes' on all 10 of these items is a distinctly better-than-average marital risk." (5)

It would seem fair to say that, with reliable data on these matters at hand, any two young people can figure out their chances for happiness for themselves. There are many combinations of personality traits that make two people congenial; and it is improbable that any individual has just one predestined mate and that, if he should fail to meet this one, his chance for marital happiness is lost. An individual who makes another's life miserable because that person refuses to marry him (or her), or who threatens to commit suicide on this account, probably is too unbalanced to marry in the first place.

There probably are no times in one's life when it is more important to utilize every resource of judgment and intelligent reasoning than when one is selecting a life partner and when he is adjusting himself to the marital relationship.

SUGGESTED FURTHER READINGS ON THE SUBJECT
OF SEX HYGIENE

1. HOWARD, FRANK E., and PATRY, FREDERICK L. *Mental Health*. Harper & Brothers, New York; 1935. Page 140.
See annotation at end of Chapter 10 (page 256).
2. OLIVER, JOHN RATHBONE. *Psychiatry and Mental Health*. Charles Scribner's Sons, New York; 1932. Page 187.
Although written for ministers and social workers, the material in this 330-page book is presented in a non-technical manner and students can get a great deal from it. The two chapters on "Sexual Factors" are well done.
3. POPENOE, PAUL, and JOHNSON, ROSWELL H. *Applied Eugenics*. The Macmillan Company, New York; 1935. Page 228.
This is a sound book for background reading on the subject of eugenics.
4. SHAFFER, L. F. *The Psychology of Adjustment*. Houghton Mifflin Company, Boston; 1936. Page 375.
This book of 600 pages is subtitled "An Objective Approach to Mental Hygiene." Shaffer develops his material on sex behavior as a part of the integrated personality. The book contains an excellent bibliography.
5. TERMAN, LEWIS M. *Psychological Factors in Marital Happiness*. McGraw-Hill Book Company, Inc., New York; 1938. Pages 180, 367, 372.
This amazing book will go down in history as a pioneer study in this field. The material is of real interest to students who are seeking scientific evidence of the factors which lead to happiness in marriage.

6. TERMAN, LEWIS M., and MILES, CATHARINE COX. *Sex and Personality*. McGraw-Hill Book Company, Inc., New York; 1936. Pages 453-454.

This is a pioneer study in the field of masculinity and femininity. This information is now considered highly significant in the consideration of the sex personality.

7. WILLIAMS, FRANKWOOD E. *Adolescence: Studies in Mental Hygiene*. Copyright 1930. Pages 115-116. The selection quoted is reprinted by permission of Farrar & Rinehart, Inc., Publishers.

This book shows how a top-ranking psychiatrist looks at adolescence. One chapter is devoted to "The Freshman's Fog." An excellent book for both students and parents.

Other useful books in this field are:

- BANNING, MARGARET CULKIN. "The Case for Chastity." *The Reader's Digest* (August, 1937). The selection on page 271 is quoted by permission of the editors of *The Reader's Digest*.

- BURGESS, ERNEST W., and COTTRELL, LEONARD S., JR. *Predicting Success or Failure in Marriage*. Prentice-Hall, Inc., New York; 1939.

- FOLSOM, JOSEPH KIRK (Editor). *Plan for Marriage*. Harper & Brothers, New York; 1938.

- GROVES, ERNEST R. *Marriage*. Henry Holt & Co., Inc., New York; 1933.

- HOLMES, SAMUEL J. *Human Genetics and Its Social Import*. McGraw-Hill Book Company, Inc., New York; 1936.

- LIPPMANN, WALTER. *A Preface to Morals*. The Macmillan Company, New York; 1929.

- RICHMOND, WINIFRED F. *An Introduction to Sex Education*. Farrar & Rinehart, Inc., New York; 1934.

- STRAIN, FRANCES BRUCE. *Love at the Threshold*. D. Appleton-Century Company, Inc., New York; 1939.

- WILBUR, RAY LYMAN. *Human Hopes*. Stanford University Press, Stanford University, California; 1940.

Chapter

I2

MODERN TRENDS IN CHOOSING A VOCATION

"The vocation of every man and woman is to serve other people." TOLSTOI

MOST students in college today are there for some purpose. Analyzing the more obvious motivating conditions, we find at least three contributory factors. First in order are the students' own objectives — their personal reasons for going to college. Second are parental desires, the cause of many family conflicts. Third are the purposes which arise out of demands which society or the state imposes upon the individual. However, the main issue, as far as an individual student is concerned, is the first of these — his own purpose in going to college. The more definite his motives, the easier will be his adjustment.

Employment the principal purpose

To prepare for a vocation is the stated objective of the majority of college students. That is, each is seeking suitable employment, an occupation, a career, or a profession. In an exhaustive and oft-quoted study, Katz and Allport (5) asked 3515 college men and women to list the three principal reasons why they came to college. Briefly, the findings were as follows:

Modern Trends in Choosing a Vocation

RANK IN IMPOR- TANCE	REASON	NUMBER OF STUDENTS	PERCENT- AGE OF TOTAL
1	In order to prepare for a certain vocation	2520	71.8
2	For general self-improvement in culture and ideals	2265	64.5
3	Because a person with a college degree can obtain a better position and earn more money	1670	47.6
4	Because of my interest in specific studies and my desire to pursue them further	1118	31.9
5	Because a person with a college education has more prestige and a higher social standing	1116	31.8
6	Because my parents wished it	729	20.8
7	For some other reason not mentioned	349	9.9
8	Because of the social attractions or athletic opportunities of college life	287	8.2
9	Because so many of my friends and relatives had gone to college that it seemed the thing to do	189	5.4
10	In order to show people I have as good a mind as anyone	80	2.3

The first, third, and fourth of these reasons bear directly upon preparation for a vocation. Other findings, more recent but not so extensive, substantiate these findings.

In the case of any individual student, probably a number of motives are involved, to all of which a college education will contribute satisfaction. For example, ten years ago one student analyzed his own situation thus: "I am going to college to prepare myself for a business career, to give myself a cultural background so that I may learn to appreciate life to a greater extent, and to make the social contacts which are so necessary to success in life." This man has become invaluable to his employers and is now well on his way up in a large shipping business.

Vocational conflicts

A family needs to be most careful in helping a son or a daughter make a vocational choice. This holds also for school counselors and others who seek to advise young people. Successful businessmen often are keenly disappointed because their sons show no interest in going into their business. Many a father has no hesitancy in letting a son or a daughter know how he feels about a choice of vocation. This often is the beginning of conflict between father and child. Similar situations may develop between mothers and their children. Family dissensions lead to conflicts within the student's own consciousness.

A case comes to mind in which a costly mistake was made. Jay Brown wanted more than anything else to become a landscape architect. His father made it clear to him that he wanted a lawyer in the family. Psychologically stated, the father's disappointment in an unfulfilled desire to enter the law caused him to seek fulfillment of his own ambition by his son. Jay acceded to his father's wishes because family conflict had made him unsure of himself. He finished his course creditably and was admitted to the bar. He practiced law five years, successfully but unhappily, and then quit. Having repaid his father for every penny spent on his college training, he took up landscape architecture and is now prominent and happily adjusted in the field of his true interest.

Continual urging of students to make immediate vocational choices is equally hazardous. They may easily become inhibited because of inability to think matters through while under pressure. When children are chided because they are slow in learning to read, they establish an emotional conflict which blocks learning. In the same way, a young person forced to make a decision about a

vocation may develop a mental conflict regarding the choice.

Business and professional men frequently oppose the desires of their children for artistic professions. Girls who choose the theater or a public career often face parental opposition or the ridicule of their own small social clique. If one is interested in a mechanical trade or in farming, one's friends may take the attitude, unfortunately, that such a vocation is ordinary manual labor and therefore socially inferior. Any of these or other external influences may cause mental conflicts.

It is vitally necessary that we recognize and understand the difficulty in order to deal with it effectively, because such a conflict may cause the student to choose some other vocation than the one he prefers when, in fact, he is well qualified to follow his preference.

In all new undertakings, whatever they may be, there is a time for action which is known as "readiness." Readiness, in choosing a vocation, is the time when all conflicts arising from the situation are resolved.

Choice versus preference in selecting a vocation

When freshman and sophomore students are questioned, many state a choice of one vocation but a preference for another. E. G. Williamson, in his book on *How to Counsel Students*, reports:

"An unpublished survey by the University of Minnesota Testing Bureau disclosed, for example, that only 62.7 per cent of 225 men students and 53.9 per cent of 145 women students seeking counseling, chiefly freshmen and sophomores, gave the same type of occupation as both their *chosen* vocation and their *preferred* vocation."

If it is true that only about 63 per cent of the men and 54 per cent of the women have chosen the lifework they prefer, what are the others thinking about?

Students in college may believe that their purposes are all their own, but their objectives inevitably are affected in some degree by their parents' wishes or by demands of society, if not by both these factors. For example, a sophomore student who declared very positively that he was a free agent in the choice of a vocation mentioned incidentally that the desire of his family that he should find something to do near home might limit his choice somewhat. It is very evident that in this matter this student was far from realizing complete freedom.

A few reasons for making a choice other than one's preference are easy to list: (1) parental pressure or influence of personal or family friends; (2) lack of knowledge about vocations in line with preference; (3) lack of time or money for training for the preferred vocation; (4) lack of ability to do the work involved; (5) availability of an opportunity in some other business; (6) a health situation which rules out the preference; (7) a desire to marry, which may lead to acceptance of the first position that is offered in order to get established; and (8) uncertainties connected with the preference.

Importance of interest

To make a successful choice, the student must know why he prefers a certain vocation and must have an interest in the field he selects. Frequently a student names a vocation as being a positive preference when in fact he is only compensating. He may be attempting unconsciously to appear well in the eyes of individuals to whom he has already committed himself, or he may be hiding a doubt as to the wisdom of his choice. Strange as

it may seem, some students actually fail in subjects preparatory for a chosen vocation in order to justify a hidden desire for a change to another vocation. This situation usually arises when an individual makes a selection without being vitally interested.

The following true story illustrates the importance of choosing a major in college which leads to a vocation of one's own preference. A student in the last half of his sophomore year was about to quit college because he had lost interest. He had been a good student in high school, but in college he was just barely passing. In mental ability he was above average and he had entered college with real enthusiasm. His counselor convinced him that before definitely deciding to leave college he should check the field of his interests. He therefore took Kuder's *Preference Record* (6) test, with the following results:

FIELD OF INTEREST	PERCENTILE
Scientific	65th (significantly high)
Computational (clerical and business)	5th (significantly low)
Musical	85th (high)
Artistic	75th (high)
Literary	15th
Social Service	18th
Persuasive	30th

Strong's *Vocational Interest Blank* (9) and other tests verified these findings. This analysis caused him to exclaim: "Why didn't I know this before? Here I am, majoring in Commerce, and I should be in something that has to do with science, music, or art."

After considering possible choices within the tested area of his preference, he hit upon the idea that he might be able to combine scientific work with music in some

branch of radio engineering. And that is just what he is preparing himself for. A happier young man cannot be imagined — interest and motivation returned as soon as he changed his major.

If his preference is not already clear to him, the student should employ every objective measure he can get to assist him in finding it. While no infallible method is known, vocational analysis has been extremely helpful to many students.

Interest can be determined

Students frequently admit, first, that they are too lazy to go to the trouble of a complete analysis with regard to their vocational choices and, second, that they are frankly afraid to face the facts.

No single test should decide an individual's choice of vocation. Nevertheless, any individual will be helped by making a study of his interest in and ability for various vocations and an investigation of the opportunities which each offers. There is much evidence that, if he finds he has the qualifications for success in a certain field and adopts it for his lifework, he will be spared the costly dislocations which are involved in a change in vocation after one is once prepared.

The first factor to be considered is interest. Strong's *Vocational Interest Blank* provides one of the best examples of various tests which have been devised. It sets out these instructions:

“Indicate after each occupation listed below whether you would like that kind of work or not. Disregard considerations of salary, social standing, future advancement, etc. Consider only whether you would like to do what is involved in the occupation. . . . Work rapidly. Your first impressions

are desired here. Answer all the items. Many of the seemingly trivial and irrelevant items are very useful in diagnosing your real attitude." (9)

In this test the student indicates liking, dislike, or indifference to some 400 items. These include a large number of occupations and other activities, various school subjects, different kinds of amusements, and peculiarities of people. The subject also is requested to rank a number of activities in order of preference, to make comparisons of interest between items, and to rate his own abilities and characteristics, such as: Does he usually start things? Can he carry out plans? Are his feelings easily hurt?

The interest norm or standard for the *Strong Vocational Interest Blank* was arrived at by testing 2340 men between twenty and sixty years of age who were known to be successful. These were distributed among eight different vocations: engineering, law, insurance, the clergy, medicine, education, writing, and Y.M.C.A. secretarial work. It was found that the interests of, say, an accountant and a physician, or a physician and a clergyman, differ greatly. This makes the interest analysis technique of practical importance in diagnosis of occupational bent and in vocational choice, with this exception: It is not considered reliable for students under seventeen, because interests are subject to considerable change before that age and, in fact, up to about twenty. Between twenty and twenty-five, changes of interest are relatively slight, and they change very little between twenty-five and fifty-five.

In scoring Strong's test, thirty-six different vocations are considered. The theory behind this type of test is proving to be sound. If one has interests similar to those of individuals who are successful in the vocation he chooses, his chances are excellent for becoming successful

in it himself. The test is sufficiently standardized to give one a good clue to his interests in comparison with those of others in any certain vocation.

Strong has prepared a similar blank for women, tested by women, which is becoming more reliable as more tests are made. However, it is frequently suggested that the information gained from the women's blank be supplemented by use of the one prepared for men, as the latter has been more widely tested. These and similar tests will aid both young men and young women in determining their interests, as one step in making vocational choices.

Interest of little avail if ability is lacking

Once the interest is determined, other important factors demand consideration. A student may, for example, score "A" or "B" in interest in engineering. He will then need to know if he has the necessary mental capacity — the flair for mathematics and science that engineers need. Next he will need to know whether he possesses the physical abilities required for success in his chosen field, and whether his other personality traits are adaptable to that line of work.

(1) *Mental capacity.* The student who sees only the romantic side of the vocation he chooses will need to get down to earth when he takes up study of the basic subjects that lead to that vocation.

It is sometimes difficult to decide whether an individual actually lacks the ability to master certain subjects or whether an apparent inability to learn them is due to emotional blocking caused by early conditioning. Professors in pre-engineering courses, for example, find that students frequently have a fear of mathematics. This fear originates in the elementary grades or in high school, as in the case of the boy whose fifth-grade arithmetic

teacher called him a blockhead. Such failures are emotional; others may be due to sheer lack of native ability.

Standard tests for various abilities frequently show at once whether or not a student should undertake certain vocational training. For example, poor scores in mathematical-ability tests may indicate that he should not tackle engineering. Should it appear that difficulty with a subject is caused by fear, then a good mental-health procedure is to clear up the matter by finding out when and how the fear began. The student can then face it as a problem to be solved. In a clear-cut case of lack of native ability, however, the most senseless thing in the world is to plan a career around that particular field of study. In time this type of failure pyramids, for one loses not only time but self-confidence, and also he comes out without adequate vocational training.

There is no disgrace in changing a major. The student's real problem is in facing the disappointment and criticism of his family and others. It requires courage to admit that one has not the ability for the field he has selected.

Which is better, to make the change immediately and to get into the right major field of study, or to go on and fail? This is where maturity counts. There undoubtedly is such a thing as natural or native ability; it is the part of wisdom to find and make use of this. If one's capabilities do not fit one situation, they are sure to be effective in another. To find the place where our particular talents can have creative opportunity is surely the thing for which we are striving.

In spite of the fact that many vocational counselors do not regard a small boy's mechanical ability as evidence of an engineering bent, or a little girl's love of music as an indication of a possible musical career, there is a founda-

tion of interest and ability in these youthful activities. Young states the case of "interest and capacity" well:

"It is evident that there are two factors which play a dominant rôle in directing the channels of interest: innate capacity, on the one hand; skills acquired through learning, on the other. Consider, for example, a girl with a sensitive musical ear which enables her to discriminate pitches accurately, and to recognize nuances of loudness and timbre. She can learn melodies readily and sing them on the key; she has a keen sense of rhythm as shown by her playing and her dancing; she can learn to read music easily and accurately. All these capacities, whether native or acquired, make musical performance as easy and natural to her as rolling down a hill. She readily excels other children in musical performance and for this wins the praise of her parents and teachers. This praise, in turn, acts as a spur to still further achievement. Undoubtedly her native capacity has much to do with the pleasantness which she derives from such unrestrained activity. Yet it must be admitted that her thorough musical education greatly enhances the pleasantness gained from her chosen art. Every interest, whether an art, a sport, a hobby, or something else, is dependent upon the same two important factors for its existence." (12)

It often happens that students see the folly of selecting a vocation for which they do not have the capacity, but their parents refuse to recognize this fact. Their attitude is, "You can do it if you will work." If the talent, or mental ability, is not present, it is stupid to continue when there are so many alternative opportunities for each of our abilities.

(2) *Physical ability.* It is apparent to anyone that success in any vocation depends upon one's physical ability to do justice to the job. For example, the young man who goes into medicine must recognize the strenuousness of this profession, with its possible long hours and irregular meals; the engineer also must be able to withstand long hours, as well as exposure and physical hardships; the nurse must be on her feet for lengthy periods; and the actress needs to be prepared for long and tedious rehearsals, late hours, sleeping when others are awake, and so on.

(3) *Suitability of other personality factors.* In Chapter 8 we used the following classification of traits to judge personality: intelligence, motility (style, grace, manner), temperament, self-expression, sociality, and physique. Mental and physical characteristics involve only two of these categories; the others also are involved in one's adjustment to the selected vocation.

It is hard to get a true perspective of one's own personality, and we are all prone to find excuses for avoiding the investigation. Although it is not easy, it is possible to get a fair rating of one's personality. Some tests, while not too reliable as yet, indicate whether one is inclined to be dominant or submissive by nature, an introvert or an extrovert, and high or low in amount of self-sufficiency. From such tendencies we may take counsel. At present, however, such tests supply only clues to personality factors.

To illustrate this: One who is an introvert — that is, who tends to want to be alone — who is submissive by nature, and who lacks self-sufficiency, might conceivably score high in interest in salesmanship on a vocational test. It is quite likely that he will not, but if he does, should he follow the leadings of this personality rating? Obviously,

this individual is temperamentally unsuited for work that requires meeting people as a salesman.

Some occupations require more ability than others to do abstract reasoning or solving of actual problems; some require more contacts with people. The individual with normal intelligence who is blessed with highly desirable traits in motility, temperament, and self-expression, may be better suited to certain vocations than the highly intellectual one whose interests are in mathematics, science, or philosophy. The individual can and must know himself.

Chance choice indicates absence of purpose

So far we have considered the influence on vocational happiness of interest, mental and physical ability, and other personality traits. The unwisdom of chance selection should now be obvious. We need only to question a number of people, however, to learn that many of them got into their occupations quite by accident. Indeed, there are those who insist that there is no other way to find a vocation.

Talking with persons who are successful in the vocation one prefers is helpful, but as a sole means for choosing a vocation this method is unreliable and usually leads to disappointment. Personality differences in people make it hazardous. Suppose that a young woman who thinks she has a preference for acting on the stage gains an interview with a successful actress. The actress on that particular day may be low in spirit, and her picture of the profession consequently will be "blue" in tone. If she is "on top of the world" because of a successful performance or a good contract, her views on the profession may be glowing ones. In other words, the facts about the vocation of acting will be encouraging or discouraging, according to the mood of the actress. This is equally true of

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other fields for young women, and for young men who seek vocational advice from doctors, lawyers, engineers, or any other business or professional men. This is chance investigation and is not scientific.

This method can be made scientific if the student interviews a great number of people who are following vocations in which he may be interested, using a standard set of questions. Conclusions can then be drawn on the basis of average responses made by these people. This is exactly the way interest tests are made. Even so, such tests have factors of unreliability and need careful interpretation. No thinking person will say, "Take this test and I'll tell you exactly what you are fitted for vocationally." But that is what most students expect. No single test will do this. It is only when we have the results from a battery of tests, to combine with personal history data, that reliable conclusions can be reached by skillful interpretation.

The scientific method

The following steps are suggested as a method for choosing a vocation:

1. Examine every interest that has persisted through childhood. Check each one against test findings and other information regarding present interests.
2. Take every available test that attempts to single out preferences, interests, motives, and attitudes. Tests like Kuder's *Preference Record*, (6) Strong's *Vocational Interest Blank*, (9) Allport and Vernon's *Study of Values*, (2) and others are now available. These are only a beginning; draw no conclusions at this stage.
3. Take tests for mental capacity, such as the *Terman Group Test of Mental Ability* (10) and the *Otis Self-*

Administering Tests of Mental Ability. (8) Of the individual tests, the Stanford Revision of the *Binet Scale* (11) is the most complete and reliable, when given by experienced psychologists. Study these results in comparison to your everyday progress in classes. Measurement of the abilities that these tests cover is valuable and is essential to knowing one's own general ability before making a vocational choice.

4. Make it your responsibility to ascertain your standing in English, mathematics, science, and the other fields in which you need information. Most vocations have specific subject-matter requirements. Many colleges give their freshmen, at some time, an achievement test. The *Coöperative Achievement Tests*, (3) for example, are available only to college testing agencies.
5. Study your personality traits. Tests for this purpose are not so reliable as those for mental ability, but one can get some indications from Gordon and Floyd Allport's *A-S Reaction Study* (1) or parts of the Bernreuter *Personality Inventory*. (4)
6. Talk with people employed in the vocations you are interested in, avoiding giving too much importance to any single interview, and thus ascertain the kinds of skills that are necessary. Visit places where your vocational choice is being practiced.
7. Collect the facts concerning the supply and demand for workers in different occupations, and determine whether the one you prefer is overcrowded. Organizations such as the National Vocational Guidance Association, New York, and the Institute of Research, Chicago, publish pamphlets about many vocations. Census statistics also are inform-

ative. These and other materials can be found in libraries.

8. Read biographies and autobiographies of successful men and women.
9. Examine the physical requirements for any vocation under consideration, as well as the mental.
10. Find out whether the vocation will take you indoors or outdoors, to near or far-distant places. Your personal preferences on these points will be self-evident.

This by no means exhausts the possibilities of the scientific method of choosing a vocation, but it indicates the procedure for self-study and exploration.

We still have a long way to go to get completely reliable vocational-testing material. But the tests we have are infinitely better than guessing. One is like an ostrich with his head in the sand if he fails to take advantage of this available knowledge. G. Frédéric Kuder, of the University of Chicago, offers a pertinent statement on this point:

“If students could be made thoroughly familiar with the material covered and the skills involved in all courses, and with the duties involved in all occupations, there would be little need for a blank such as the Preference Blank [his own test]. In the absence of such a universal knowledge, a blank of this sort is deemed to be of use in predicting how a person is likely to react to situations with which he may not be familiar on the basis of his reaction to situations with which he is familiar.” (6)

For the young person seeking a vocation, college is a timesaver. It presents every opportunity for investigating various occupational fields. After one is located on a

job, working from morning until night, there is little time to study other vocations. Looking for leads outside of business hours and going to night school to improve himself is the lot of the fellow who must choose his occupation without the benefits of college training.

*Increased opportunities make vocational
choice difficult*

In medieval times, when the trade guilds were in control, a requirement for admittance to any vocation was that one's father should have been a worker in the same occupation. A century ago, when about 90 per cent of the population of this country was engaged in agriculture, it was natural for one raised on the farm to stay on the farm. With mechanized production, farm products now can be produced with one tenth the man power required formerly. This and similar situations in other fields create many new problems in vocational selection.

Another reason why the problem of vocational choice is a difficult one at the present time is specialization and the tremendous increase in the number of occupations. If we stop to think of the many specialized jobs which have developed in connection with modern inventions — automobiles, motion pictures, radio, aviation, for example — we can understand why the United States Census Bureau found more than 17,000 different occupations in New York City alone. The Employment Service of the United States Department of Labor recently has published a *Dictionary of Occupational Titles* which defines 17,452 vocations known by 29,744 titles.

Frances Maule, in a book entitled *Men Wanted*, says:

“Once upon a time a tailor was a tailor —
nothing less, nothing more. Today he may be a

pattern-maker, a cutter, a fitter, a finisher. Once upon a time a shoemaker was a shoemaker — nothing more, nothing less. Today — well, visit a shoe factory sometime and see for yourself how many different things a shoemaker may be. . . .

“New machines, new inventions, new fashions, new needs, new customs, create new jobs.” (7)

For example, take the motion-picture industry. In addition to those employees who are trained in the technical skills of direction, lighting, designing, make-up, script writing, acting, and so on, many others are needed for any picture. An expert in history may be required to prevent factual errors, one in foreign affairs to avoid possible offense to foreign nations; and experts in chemistry, metallurgy, court procedure, music, and dozens of other fields of knowledge are constantly employed.

When professional and commercial life was less complex and when business units were small and were managed by individual owners, it was possible for a young person to acquire first-hand information about jobs by personal acquaintance with the employer and by observation of the different phases of work. Today this is seldom possible. However, if the young person will note the many technical changes that are taking place in all fields, he will realize that there are jobs just as good if not bigger and better than ever existed before.

Opportunities for a vocation of service

Tolstoi's statement, “The vocation of every man and woman is to serve other people,” is just as true for business pursuits as it is for other vocations. The trend today is toward an enlightened sense of work as a social service, and toward seeking happiness in work rather than what usually is referred to as “profit.” The business or pro-

fession today that does not serve the public goes out of business.

Edward R. Stettinius, Jr., formerly of the United States Steel Corporation, in an address before alumni of the Harvard Graduate School of Business Administration, reprinted as an introduction to Maule's book, said:

"We can achieve the utmost in economies by engineering knowledge; we can conquer new fields by research; we can build plants and machines that shall stand among the wonders of the world; but unless we put the right man in the right place; unless we make it possible for our workers and executives alike to enjoy a sense of satisfaction in their jobs, as well as that feeling of personally contributing to the well-being of society which springs from the knowledge of a good job well done — unless we can do these things, our efforts will have been in vain." (7)

The need for study of the science of human relationships has never been greater than it is today. Broad vision and tolerance of other points of view are of paramount importance. Courses in public relations and in industrial relations are now finding their way into college curricula. We are beginning to teach people the art of getting along with each other.

One of the tremendous problems of the present day is the fact that we are manufacturing and producing many more products than we are able to distribute. New and improved methods are needed in the services of transportation and distribution.

Industrial and commercial developments in other countries are important, since foreign events have a direct bearing upon our own vocational fields and affect our contributions to society in general. For centuries trade

has been at the base of conflicts between countries. Better commercial relations and reciprocal trade treaties may before long create increased demands at home and abroad for better transportation and distribution machinery. There are innumerable opportunities in these areas for young men and young women.

Hundreds of new industries have resulted from the so-called "chemical revolution." Chemical research and engineering appear to offer unlimited possibilities.

To mention a few areas in which developments have already begun, will give some idea of what lies ahead in employment.

1. Air-conditioning followed very closely on the development of electric refrigeration, and affects the whole building field as well as mining, railroads, automobiles, and ships.
2. Solid plastics, useful for furniture construction, for airplane fuselages and wings, and for hundreds of other uses, are developing into an enormous industry.
3. Celanese, rayon, and now the new nylon can make this country independent of other countries for silk. The changes in both manufacturing and trade will be great.
4. Cellophane is becoming an important industry. Practically everything now comes wrapped in this synthetic material, and its usefulness for other purposes is rapidly increasing.
5. All-steel-frame prefabricated houses and houses constructed largely of glass cannot fail to affect building.
6. The airplane industry is expanding so rapidly that it cannot get enough skilled workers. Able engineers to develop high-powered motors, and precision workers to produce them, are urgently needed.

7. Radio manufacturing and radio broadcasting are twin industries that constantly absorb the activities of more and more people. We are so accustomed to radio now that we forget the first commercial broadcasting was as recent as 1922.
8. Processing and marketing of frozen fruits and vegetables, and particularly the development of new methods of canning, are opening up wide fields of production and distribution.

In these and many other industries there are almost unlimited opportunities for trained men and women. One must realize that occupations which previously were limited to men are now open to women who prepare themselves adequately. Also the preponderance of men in certain industries is offset by new fields of endeavor which employ women. For example, electric-equipment companies employ people for advertising work, selling, dietetic work, and demonstrating. All these provide large fields, with opportunities for executive work for both men and women.

Solid plastics and prefabricated houses provide openings for architects, among others, and broaden the possibilities for employment in interior decoration and in the designing of functional furniture.

In the manufacture of synthetic textiles, laboratory technicians are needed — both men and women. The large majority of men in certain phases of the work is balanced by increased opportunities for women in advertising, sales, designing, and related jobs.

Radio provides vocations of many kinds — for library, music library, musical, and literary specialists — in addition to its more technical phases.

All these industries create needs for research workers

of different types, for secretarial employees who can progress to executive or sub-executive positions, for bookkeepers, accountants, and personnel and library workers. These jobs are open to both men and women.

Following are a few other "leads" in the field of vocational choice:

1. Nursery school teaching is becoming a highly specialized field.
2. Men are in demand for care of community forests and for tree surgery. Both men and women find landscape gardening a desirable occupation.
3. Technical jobs are opening daily in Federal employment service. Civil service offers an ever-widening field of professional, scientific, and sub-professional work. The government agencies in social service alone present many diversified opportunities.
4. Colleges are offering special training courses for hotel management and police work. Previously these were train-on-the-job types of employment.
5. Aviators, as well as many types of skilled technicians in airplane design and construction, are in demand. For women this field at present is limited to the auxiliary services, such as air hostesses and instructors.
6. Opportunities are numerous for trained medical technologists and physical-therapy specialists. Public health is a large field. Public health nursing employment has been increasing steadily, due to large Federal grants. Industrial nursing is expanding under the stimulus of workers' compensation and employee legislation.
7. A demand for photographers is developing with the growth of tabloid newspapers and magazines, illustrated advertising, aëromapping, and so on.

8. Meteorology, an old science, offers new opportunities in connection with air transport.
9. Vocational guidance is a big field in itself, and is now being extended to include adult guidance and reëducation. Trained counselors are in demand.

These illustrate a few of the great frontiers which beckon to the present generation of college people. At the end of this chapter a few sources are listed from which further information about almost any sort of vocation can be obtained.

Some questions — and a challenge

“What do I know after reading this chapter that I didn’t know before?” the student may ask.

Being up in an airplane for the first time and in charge of the controls may be a life-and-death matter. Reading about such a situation while sitting in a comfortable chair on the ground is quite another matter. Trying to make good on a job is one thing, but just reading about that job with no direct responsibility or need to maintain status is something else again. We may ask the student, then: “Is it of any importance to you to get yourself into the right niche in life? If so, what job would you rather have than any other?”

Now we challenge *you* as a student to answer these questions:

1. Did you know that the most important job you will ever have is the job of preparing yourself, right here and now, in college?
2. Is the choice of a vocation, or preparation for it, or both, your chief purpose in attending college? Seventy-five per cent of college freshmen and sophomores name both.

3. Did you know there may be a vast difference between your preference for a vocation and the choice you make? Did you read the specific reasons for this discrepancy, as given in this chapter? Can anything be done about it?
4. Did you know that one can determine his preference on the basis of interest? We do best that which we like best.
5. Did you know that if your interests are the same as those of successful people in a vocation, your chances for success in that field are excellent? Do you understand that your interests can be measured in relation to those of others?
6. Did you know that the interests of most people fluctuate a great deal before they reach the age of twenty, not so much between twenty and twenty-five, and only slightly after twenty-five? The significance of this is that the earlier you actually know what your interests are, the better.
7. It is obvious that interest is useless in the vocational field unless there is ability to "follow through." You probably knew this; but did you realize that there is no disgrace in changing your vocational choice should you find that you do not have the particular abilities required for it?
8. Did you know that, in addition to interest and mental capacity, your personality balance and physical ability should be considered in making a vocational choice? Emotional stability and maturity are so important in employment that some authorities rate them as one half. Can we determine our personality balance? Yes, within limits. This requires more self-study, however, than any other factor.

9. Will you work with zest, or will you hate your job?
10. Did you know that a great many men and women get into their vocations by chance, which causes many unhappy vocational situations? A scientific approach will help greatly in solving this admittedly difficult problem.
11. Do you hate tests? If so, this is only because you are afraid to face facts. Any vocational selection based on facts must be successful. Of what are you afraid? Fears, you know, can be analyzed and directed.
12. Did you ever really read about vocations? Did you ever read a biography of a successful person, except as an assignment in English? Try reading about men and women who have done well the thing you want to do. For example, every medical student should at some time read *The Life of Sir William Osler*, the great physician. This kind of reading is inspirational as well as informative.
13. You have heard a good deal about how difficult it is to choose a vocation today. Did you know that thousands of different occupations have developed out of modern business and industrial methods? If you feel defeated, you have not studied the possibilities. There is a job for you. Did you know it?
14. Did you know that "Service" is the modern watchword in choosing a vocation? The new frontier for students is to master the science of human relations. The successful ones ask, "How happy will I be?" not "How much money can I make?"

There are five important points to be remembered when one is choosing a vocation. They are as follows:

1. Know yourself.
2. Use the scientific method.
3. Choose according to your preference, bearing in mind your mental and physical capacities and other personality traits.
4. Learn all you can about the vocation.
5. Look upon your vocation as an opportunity for service.

Then the choice will be wisely made.

SUGGESTED FURTHER READINGS ON THE SUBJECT
OF VOCATIONS

1. ALLPORT, GORDON W. and FLOYD HENRY. *A-S Reaction Study*. Houghton Mifflin Company, Boston; 1928.

This test measures "A," ascendance (dominance), and "S," submission, in personality. The tendency to dominate a situation or, on the other hand, to submit to it is a characteristic which yields to measurement. This personality trait may make a great difference in the type of vocation for which one is suited.

2. ALLPORT, GORDON W., and VERNON, PHILIP E. *Study of Values*. Houghton Mifflin Company, Boston; 1931.

This is a scale for measuring dominant interests in personality. The study aims to measure the relative prominence of theoretical, economic, aesthetic, social, political, and religious interests, and will help the student in making an evaluation of his personality suitability for a chosen vocation.

3. American Council on Education. *Coöperative Achievement Tests*. Coöperative Test Service, New York; 1940.

This series of tests measures one's academic achievements in English, history, foreign languages, mathematics, science, social studies, and so on. In these tests we have a scientific method for ascertaining proficiency in

specific fields of learning. Such information obviously would be a factor in making a vocational choice.

4. BERNREUTER, ROBERT G. *The Personality Inventory*. Stanford University Press, Stanford University, California; 1935.

Although this test of 125 questions in some cases has been found not too reliable, it does offer guidance in measuring self-sufficiency, introversion-extroversion, and dominance-submission. To be of value, the material must be properly interpreted by a competent psychologist. The test offers supporting data for other tests in the same field.

5. KATZ, DANIEL, and ALLPORT, FLOYD HENRY. *Students' Attitudes*. The Craftsman Press, Syracuse, New York; 1931. Pages 10-11.

This book of 400 pages contains interesting reports of studies on college activities, attitudes toward studies, personal ideals, the college situation, choosing a vocation, fraternities, snobbishness, cribbing, coeducation and moral standards, and religion.

6. KUDER, G. FREDERIC. *Preference Record*. University of Chicago Book Store, Chicago; 1939.

This is a self-scoring interest test made up of eleven sets of paired questions, thirty choices to each set. Each pair of questions refers to two activities. One may like both activities mentioned or may find them both unpleasant. In either case the subject must indicate which he would choose if he had to choose between the two. One cannot answer all these questions honestly without getting definite information about his own preferences. These have specific vocational significance.

7. MAULE, FRANCES. *Men Wanted*. Funk & Wagnalls Company, New York; 1937. Pages 145-157, xxix.

The author, in this interesting and readable book of 290 pages, faces facts on present-day employment problems in an intelligent manner. The style of the book is

journalistic, and its contents are of practical value to the reader.

8. OTIS, ARTHUR S. *Otis Self-Administering Tests of Mental Ability*. World Book Company, Yonkers-on-Hudson, New York; 1922, 1928, 1929.

This series of tests, each consisting of 75 items covering vocabulary, mathematics, reasoning, and general information, provides an excellent check on one's mental ability. The scores are interpreted into percentiles of mental-age levels.

9. STRONG, EDWARD K., JR. *Vocational Interest Blank for Men: Revised*; also *Vocational Interest Blank for Women*. Stanford University Press, Stanford University, California; 1938.

This test has been described in some detail in the foregoing chapter. It serves as an excellent guide to the student in ascertaining his own vocational interests and attitudes.

10. TERMAN, LEWIS M. *Terman Group Test of Mental Ability*. World Book Company, Yonkers-on-Hudson, New York; 1920.

This is a standardized group test of mental ability. It is available in most colleges and is simple to take and to score. Tables are available for computing corresponding scores on the *Stanford-Binet Scale*.

11. TERMAN, LEWIS M., and MERRILL, MAUD A. *Revised Stanford-Binet Scale*. Houghton Mifflin Company, Boston; 1937.

This standardized individual test brings out facts that no group test reaches. It provides an excellent measure of intelligence, and the student should not miss the opportunity to take it when a competent psychologist is available to give it to him.

12. YOUNG, PAUL THOMAS. *Motivation of Behavior*. John Wiley & Sons, Inc., New York; 1936. Page 323.

See annotation at end of Chapter 3 (page 73).

Other useful books in this field are:

- BAKER, JOHN C.; KENNEDY, WILLIAM D.; and MALOTT, DEANE W. *On Going into Business*. McGraw-Hill Book Company, Inc., New York; 1936.
- BERNAYS, EDWARD L. (Editor). *Careers for Men*. Doubleday, Doran & Co., Inc., New York; 1939.
- COTTLER, J., and BRECHT, H. W. *Careers Ahead*. Little, Brown & Co., Boston; 1933.
- FILENE, CATHERINE. *Careers for Women*. Houghton Mifflin Company, Boston; 1934.
- GLOVER, JOHN G., and CORNELL, WILLIAM B. *The Development of American Industries*. Prentice-Hall, Inc., New York; 1936.
- KITSON, HENRY D. *I Find My Vocation*. McGraw-Hill Book Company, Inc., New York; 1937.
- LEUCK, M. S. *Fields of Work for Women*. D. Appleton-Century Company, Inc., New York; 1938.
- LYONS, GEORGE J., and MARTIN, HARMON C. *The Strategy of Job Finding*. Prentice-Hall, Inc., New York; 1939.
- MYER, WALTER E., and COSS, C. *The Promise of Tomorrow*. Civic Educational Service, Washington, D. C.; 1938.
- PITKIN, WALTER B. *New Careers for Youth*. Simon & Schuster, Inc., New York; 1934.
- PLATT, RUTHERFORD HAYES. *Book of Opportunities*. G. P. Putnam's Sons, New York; 1933.
- WILLIAMSON, EDMUND G. *Students and Occupations*. Henry Holt & Co., Inc., New York; 1937.

Also, the National Vocational Guidance Association, New York, and the Institute of Research, Chicago, have compiled data relating to many different vocational fields. Such information is available in pamphlet form and can be found in most school and public libraries.

Chapter

13

THINKING: THE BASIS OF RESPONSIBILITY

"Thinking is easy, acting is difficult, and to put one's thought into action is the most difficult thing in the world." GOETHE

WE all are fully accountable for our actions; therefore the thoughts which initiate our acts should at all times be clear and trustworthy. To achieve this is difficult, as Goethe has observed.

Few things in life have consequences more serious than those that result from thinking. Thought is at the root of intellectual and social integrity; it originates action and leads to responsible action, which can be attained in no other way. For action to take place there must be desire, followed by thought.

One of the most important responsibilities of thinking is to make judgments and to draw conclusions. Thinking enables us to act deliberately and with intent, and to plan effectively for future eventualities. Reaching conclusions by reasoning certainly is physically less hazardous and mentally less distracting than learning in the "school of hard knocks." For example, thinking — a great deal of it — is the chief requisite in choosing a vocation. Life is too short to select a career by actually trying out various

occupations. Mental analysis of the problem of vocational choice is much more efficient and saves valuable time.

When we are confronted by new situations for which we are required to evolve new modes of action, we perceive thinking to be our most precious asset. Life moves too swiftly to permit one to work out a formula for each move. Ideas gained from experience are tested constantly, and are rearranged or thrown into new combinations for use in meeting each fresh problem.

Thinking is a "whole person" matter. *How* we think has much to do with *what* we think, and others judge us by the actions which result from what we think.

What is thinking?

When we think we seldom stop to consider how thought is achieved. At first glance this may appear to be an academic problem which should be left to the philosophers. Aristotle referred to the "soul" of the mind, which he conceived to be a unit without parts, and to the "body" of the mind as being divisible into parts. Descartes, the French philosopher, centuries later defined the "soul" or the "mind" as a "thinking substance." He was convinced that mental activity was primarily a thought process.

Thinking is now considered to be essentially a matter of recalling past experiences by the processes of association. Through research we have acquired scientific evidence that associative bonds are formed in a conditioning process. This is a basis for organizing experiences into thought. As the concept of association of ideas evolved and the importance of attention for concentration became known, thinking came to mean action.

Usually when we speak of thinking we mean reasoning,

the highest thought process. This is a conscious effort to utilize past experiences in dealing with present situations or in anticipating the future. There are at least three generally recognized levels of thinking: (1) reverie, or effortless thinking; (2) routine, or habitual thinking; and (3) reasoning, or mental exploration and inference. Thinking at any of these levels is a conscious mental procedure.

(1) *Reverie, or effortless thinking.* All thinking involves associations with previous learning. Reverie, or the daydreaming type of thinking, results from what are called "free" associations, which occur in idle moods.

In reverie an individual's mind may wander far while he sits quietly. Almost anyone can supply examples from his own thinking. The sound of the horn of a passing automobile may remind us of a car we once had. This thought, in turn, recalls a trip we took in that car. We remember starting before dawn, being delayed by an accident we witnessed, taking an injured man to the hospital. And away we go, with our thoughts jumping from one image to another and going farther and farther afield with each new association.

Many of us are addicted to reveries. There is a remote chance that something constructive may accidentally result from a daydream. All too frequently, however, these mental wanderings lead nowhere. Reverie is not a desirable type of thinking if one wishes to reach a conclusion about some problem. It is one kind of thinking, however.

(2) *Routine, or habitual thinking.* We all know what it means to do certain things from habit. Thinking also may follow habit patterns. When an instructor assigns to us a number of similar problems in mathematics, we look for the principle that underlies their solution. When

we discover it in the first problem, we move along in routine fashion to solve the others. In studying any assigned piece of work we conserve time by bringing to bear upon the task habits of thought acquired from having dealt successfully with similar situations. We do not stop to analyze each step if we can avoid it.

Thinking of any sort which follows a regular pattern is of the habit type. Preconceived ideas and prejudiced or biased thinking are undesirable types of habit thinking. Some people automatically think in an optimistic vein; others invariably are pessimistic. Habit thinking is commonly used and requires a measure of effort, but not so much as does the next higher level.

(3) *Reasoning, or mental exploration and inference.* Robert S. Woodworth, in his *Psychology*, illustrates the reasoning process as follows: Suppose we need a hammer but do not find it in its usual place. If we look for it here and there, ransacking the house without a plan, we use what is known as "motor exploration." Finding this trial-and-error procedure useless, we stop to think where we may have left the hammer. By a sifting process among various logical possibilities, we ultimately recall where we last used it and conclude that it will be found there. This process is reasoning, or mental exploration and inference.

The trial-and-error method evidently is used in both motor exploration and mental exploration. If we do not ransack the house, we ransack our memory. Reasoning is a process of recalling this bit of evidence and that bit of evidence and turning each piece this way and that way in the mind, until a group of facts is recalled which fit together in logical sequence. We then make an inference or draw a conclusion. We do not go straight to the desired goal by mental exploration any more than we do by

motor exploration, but we may reach it more expeditiously and effectively.

Reasoning uses thinking clues rather than the physical gropings of motor exploration. It follows through by linking these clues with previous learning. The successful reasoner seeks and finds solutions. He draws conclusions and forms concepts, and integrates these understandings and meanings with other concepts in a total meaning.

Intuition, insight, and inspiration in thinking

Some persons who seem to be more intuitive than others are sometimes referred to as "psychic" thinkers. They give the appearance of being able to understand principles or situations immediately, without having examined the data or facts relating to them.

The so-called "practical" individual who "plays hunches" may win occasionally, but psychologists can find little scientific basis for this sort of thing. Nevertheless, intuition is a form of thinking, even though it may be guessing. Therefore we cannot ignore it entirely.

Insight and inspiration imply the sudden grasping of meaning and the solution of a problem without apparent previous experience or reasoning. In other words, they are ideas that seemingly come to one instantaneously and "out of the blue." They bear close relationship to what is often spoken of as "creative imagination."

John F. Dashiell, in his *Fundamentals of General Psychology*, points to examples of insight and inspiration among creative writers such as Coleridge, who awoke from a dream to complete his *Kubla Khan*, and Masfield, whose poem, *The Woman Speaks*, appeared to him in a fading dream. However, much of the seeming spontaneity of thought doubtless is illusory. Wayland F. Vaughan says of creative thinking:

"The creative process evolves through several successive stages:

"(1) Preparation — first is the period in which the problem is investigated.

"(2) Incubation — next, the mind goes over the information acquired in the first stage.

"(3) Illumination — then, of a sudden, appears the inspiration, the hatching after the incubation." (5)

Apparently, then, inspirational thinking and insight do not result from a direct reasoning process as we understand the meaning of this. But at some time or other experiences have been recorded which are recalled by an associative process. As the literary genius Poe said, "Most writers — poets in special . . . would positively shudder at letting the public take a peep behind the scenes, at the elaborate and vacillating crudities of thought . . . which in ninety-nine cases out of the hundred constitute the properties of the literary actor." Another creative writer once said that his inspiration usually came to him after he had "consistently applied the seat of his pants to the seat of his chair."

There is little doubt that no matter how suddenly an idea may seem to strike one, there has been some previous thought regarding the problem. That is, imagery in the form of experience is lurking in the background somewhere, even if it is not recalled logically. Apparently there is nothing mysterious or supernatural about such things. Intuition, insight, and inspiration all result from associations which have been stored up at some time, but they should not be confused with logical reasoning, which produces exact inferences by applying known facts or laws to specific data.

Vocabulary and terminology in thinking

As tools for thinking, we need words or symbols, as is shown by the following incident. A carpenter told his new and inexperienced assistant to bring him a rip saw. The assistant, not knowing the names of the different saws, brought several kinds and watched to see which one the carpenter picked up. Thereafter he knew which was the rip saw. But if he had not understood the difference between the meanings of the words "saw," "hammer," and "plane," he would have lacked the experience necessary for this thought process. As we learn the meaning of more words, we learn the meaning of more things. The more things that have meaning to us, the greater is our capacity to think.

Words themselves are merely symbols of things, events, or situations. A word stands for something, but it is not that thing. A child pushing a stick of wood along the floor may say "choo-choo." To him both the stick of wood and the syllables "choo-choo" mean a train. Later he learns to substitute the word "train" for the babyish syllables. This word is then the symbol for the train, but it is not the train any more than was the block of wood or the symbolic sound, "choo-choo."

Specific fields of study make use of specialized vocabularies. To think accurately about chemistry, we need to know the symbols which are the objectified facts of chemistry. Two physicians in a technical discussion may use words the layman cannot understand. A legal stenographer must know terms that she would not ordinarily need in other occupational fields.

Words, like chameleons, change color. A word may convey several meanings when it is used in various groupings with other words. We identify the meaning of the

word by the context; that is, by how it is associated with others in the passage or discourse. For example, a small child may understand clearly what is meant by the statement, "The *bear* is in the zoo," and yet will get no meaning from the sentence, "Father must *bear* the burden." As he matures, the child will understand the word "bear" in the latter statement by its context.

College students hear much about the "human race" and the "white race" but do not confuse the meaning of "race" in this sense with its use in "horse race."

The word "swell" means "to expand or increase in size." Yet there are students who use "swell" to express a favorable reaction to almost anything, and from the context we perceive that they intend the word to mean "wonderful," "beautiful," or "delicious." On the other hand, if their reaction is unfavorable, they use another all-inclusive term, "lousy," which in its correct sense means "infested with lice." A meal not to their liking is either "lousy" or "rotten." Do they really mean that the food is infested with lice, or that it is decayed? Of course not.

Illustrations could be multiplied to show how, depending upon the context, the same word may mean many different things. This further emphasizes the point that a word is only a symbol. The use of precise and definitive words helps to make meanings more exact and results in clearer thinking.

Words reflect emotions. Certain words, used either in thinking or in interpreting thought, may bring about emotional reactions. For example, if someone says to us, "I saw a dog," we may think of a large or a small dog, a black dog or a brown dog, a terrier or a collie — any kind of dog that we please. But suppose he says, "I saw a mongrel." We are at once conditioned emo-

tionally to think of the dog as being unattractive and nondescript.

Robert H. Thouless, in his book, *How to Think Straight*, says:

“There is a well-known saying that the word ‘firm’ can be declined as follows: I am *firm*, thou art *obstinate*, he is *pig-headed*.” (4)

He points out that, while the objective, unemotional meanings of “firm,” “obstinate,” and “pig-headed” are all the same, they have different emotional meanings. “Firm” is accompanied by a feeling of strong approval; “obstinate,” by mild disapproval; and “pig-headed,” by strong disapproval. If we like a person who is somewhat stubborn we say he is firm, but if we dislike him we say he is obstinate or pig-headed.

Thouless refers to such words as “emotionally toned.” For example, during the First World War the word “Huns,” used in reference to the German people, developed among English-speaking people an emotional tone of intense dislike. In the Second World War certain Britons became known as “appeasers.” The word “appease” means “to calm, to soothe and bring about peaceful settlement of a question.” But in the emotional atmosphere of wartime the word “appeaser” has been so distorted that it labels a person bent on treachery.

To catch the full purport of emotionally toned words, one needs only to follow the statements made by opposing factions in an election. The words used to describe the favored candidate imply perfection, and those that tell about the opponent would lead us to believe he is a scoundrel of the blackest dye.

Emotional reactions to words affect our thinking in other ways. We may dislike the thing a word represents

because someone we dislike uses that word. A woman confessed recently that whenever someone prefaces a remark by saying, "Loosely speaking," she discredits the statement completely. Asked for a reason, she said she had taken a violent dislike to a person who habitually used that opening phrase. How many times are our judgments prejudiced by words to which we react unfavorably for personal reasons! On the other hand, words or phrases may be associated in our mind with someone we like very much, and thus they may gain an undue influence in our reasoning processes.

When word meanings become entangled with the emotions, objective interpretations are lost. It is doubtful if one ever can think straight under these circumstances, because it is the truthful, objective meaning of words that counts in reasoning.

Mischief-making inferences

Reasoning culminates in inferences. We draw conclusions by applying previously accepted judgments or learning to specific data. Inference is a mental process of making judgments indirectly. For example, if John and Tom stand side by side, we can judge their relative heights directly and without inference. Suppose, however, that we have not seen the boys, but know only that Tom is older than John. We may infer from this, perhaps incorrectly, that he is taller than John. However, the height of each can be determined by measurement, and from these two figures we can conclude which is the taller of the two.

If the facts upon which an inference is based are false, or are colored or twisted by emotions, or are misunderstood because of incorrect interpretation of words, an incorrect inference or judgment may be made.

Words can be tricksters. Word symbols have a way of becoming sources of erroneous inferences. For example, Woodworth points out that if Mary and Jane both are said to resemble Winifred, this does not necessarily mean that Mary and Jane resemble each other. The word "resemble" is not precise enough to describe in what way or ways they are like Winifred. Mary may resemble her in appearance, Jane in manner of speech.

Burnham, in *The Normal Mind*, states that a symbol is a device to save a vast amount of unnecessary thinking. But after a time, he points out, the word may become substituted in one's mind for the thing with which it is associated, often with queer results. He tells of a farmer who said he did not approve of daylight-saving time "because the crops need the early morning sun." To him the word "saving" had come to mean "removing from active use," and "saving daylight" meant taking a part of the daylight away from the growing crops.

Chase, in *The Tyranny of Words*, gives the following example of identifying a word with the thing itself:

"A research chemist has supplied me with an excellent example of the proclivity to identify name with thing. He was employed by a large manufacturer of starch. A single grade of starch was milled to varying degrees of fineness, of which the most expensive bore a brand name which I will call Queen. Subsequently he was called in by a candy manufacturer who used great quantities of Queen starch to make glucose. The chemist told the management that a cheaper starch than Queen could be used without changing the quality of the candy or its chemical analysis. The management promptly acted upon his suggestion. Thereupon the morale of the factory went to pieces. Foremen

and workers were convinced that the new starch was inferior, and bad for the candy. Output fell, labor costs increased, batches were spoiled, misunderstandings developed. My chemist . . . obtained a number of old Queen cartons and poured in the new and cheaper starch. The workers saw the label and were reassured. Output promptly returned to normal. The label, the word 'Queen,' had made the difference. The working force of the factory had confused their orders of abstraction and mistaken the name for the thing." (1)

The name was not the starch; nevertheless, to the people who made the candy, the label on the box had all the properties of the starch itself. Substituting the symbol for the thing symbolized is hazardous to straight thinking. This is something that everyone who wants to learn to reason must know. An investigation of the facts about the brands of starch, coupled perhaps with tests or analysis in the presence of the workers, might have solved the problem of the candy makers.

Prejudice, bias, and rationalization. One of the greatest dangers to clear thinking is the tendency to believe what we wish to believe. When we infer things that the facts do not prove, we get into trouble. Chase illustrates a very common fault in reasoning:

"John asks, 'How would you define a corporation?'

"Tom answers, 'A corporation is a legal device for avoiding personal responsibility and plundering the public.'"

 (1)

Tom states a corporation's legal responsibility well enough. But observe the inference in the last part of his statement. He may have known of some such organiza-

tion which indulged in unfair business practices, but as a general definition covering all corporations his statement is emotional, prejudiced, and not based on fact.

Oftentimes an individual thinks he is reasoning when he is merely rearranging his prejudices. Convictions that certain things are right or wrong, good or bad, true or false, which one accepts blindly and without giving thought to the facts, fall into this category. Conclusions based on prejudices are biased opinions. For example, a person considers a public matter. He may believe he makes his decision by thinking the issue through and weighing the facts, but actually he accepts the arguments proposed by his own political party and rejects those of the others.

This is similar to the process known as "rationalization." When we rationalize we draw the conclusion we want, close our minds to other possible solutions, and then look for evidence that will support our decision. In other words, we think what we wish to think; we allow our desires to upset our reasoning. For example, when we want to make a purchase beyond our present ability to pay, we say, "I will be able to meet this obligation when it comes due." We believe, for the moment at least, that we will be able to do so, although if we were to examine the facts unemotionally we might arrive at a different conclusion. Rationalization traces back to fear of facing facts.

Tabloid thinking. Robert H. Thouless, in his book, *How to Think Straight*, says, "Most true statements about complicated matters of fact cannot be summed up in a few words." (4) Yet many of us accept slogans or formulas rather than think out things for ourselves, and permit these high-sounding substitutes for truth to govern our feelings and actions. Thouless calls this "tabloid thinking," and illustrates its inadequacy by these two

phrases, opposed to each other in meaning, which purport to be statements of truth about the involved question of tariffs: "Food taxes mean dear food." "High tariffs make high wages." Anyone who stops to think will realize that many more words than this, and many qualifying phrases, are required to describe the effects of a tariff in all its aspects and applications. Or take the slogan, "Stuff a cold and starve a fever." This was twisted from the original statement, "*If* you stuff a cold, you will later have to starve a fever," which advances a totally different meaning. Yet people follow advice of this kind, to their own detriment.

A simple formula, with the problem's uncertainties, distinctions, and qualifications all left out, may save the time and effort needed for investigation, and tabloid thinking may be useful in achieving group action; but both are fraught with danger because they do not give all the facts. Slogans may help to win a war, but these seeds of parrot-mindedness are badly planted for continued peace after the war. Thouless declares that public men who use tabloid thinking to stir peoples by inciting hatreds and class distrust should not be allowed to run for office. College yell leaders are permitted to stir up the combative and non-thinking spirit, but in relations such as those between labor and capital and in foreign affairs, leaders who use meaningless slogans to appeal to the unthinking should not be tolerated.

Tabloid sayings may sometimes serve a useful purpose as nuclei around which we may gather the materials of our own independent thinking. For the most part, however, we accept weak-kneed, mischief-making substitutes for clear thinking because we cannot be bothered with the complications of logical reasoning, or because we fear to face the facts which logical conclusions involve.

Precise thinking and accurate imagery prevent errors

Precision in thinking, which obviously reduces errors in thought, is dependent more upon intelligence than upon any other single factor. Furthermore, one measure of intelligence is the individual's relative ability to direct and control associations. It is highly desirable that one be able to associate new learning accurately with old, and to avoid emotionally toned words, in order to reach objective, unbiased conclusions.

Some individuals have photostatic minds. That is, they are able to reproduce almost verbatim from a mental image whatever they see on a page of print. We say of them that their visual imagery is good. Others have strong auditory imagery, and can reproduce accurately much of what they hear. Others derive mental responses from the sense of touch or smell. These types of sensory imagery are extremely useful in "visualizing" ideas or situations in thinking, and are a basis for precise thinking about these ideas or situations. However, if imagery does not lead to mental exploration and inference, it is of little value to the working mind. For example, so-called "memory experts" can recite great volumes of facts acquired through visual or auditory imagery, but they do not necessarily coördinate these facts into a reasoning process.

Individuals vary greatly in sensory imagery, and so we cannot say that this power is absolutely essential to accurate thinking. Imagery, nevertheless, is a tool for thinking, and a very good one.

Reflective thinking the aim of all reasoning

John Dewey, in his book, *How We Think*, states:

"Put in positive terms, thinking enables us to direct our activities with foresight and to plan

according to ends-in-view, or purposes of which we are aware." (2)

We are all familiar with what it means to take a subject and turn it over in our minds and give it serious and consecutive consideration. Dewey states that reflective thought involves the passage of a succession of things-thought-of through the mind. He observes that this series is "not simply a sequence of ideas, but a *con*-sequence." (2) In other words, it is a consecutive order of thoughts, each depending upon the preceding one, each determining the next one as its proper outcome. Our aim is to arrive at true meanings whenever possible.

In reflective thinking, according to Dewey, there are five steps: (1) The thinker is conscious of a difficulty or a puzzling situation; (2) he defines the problem and isolates the issues involved; (3) he sets up a tentative solution or a hypothesis; (4) by mental exploration he tests his hypothesis by checking the validity of the facts behind it; and (5) on the basis of his findings he adopts or discards his hypothesis. If he discards this solution, he tentatively adopts another and repeats the process until he finds a satisfactory answer.

Judgment and everyday thinking. Ordinarily we do not stop to think of these steps while we are thinking — as we develop ability to reason, they become a matter of habit. We hear it said that certain individuals have good judgment. They are known for their good old-fashioned "horse sense." Most of these individuals are not known as thinkers in the academic sense of the word. Nevertheless, although they have not had lessons on how to think, they have learned by everyday experience to follow the procedure of reflective thinking, which relies upon known data and reasoned judgments. Our daily life con-

sists of making judgments. We constantly judge situations and make decisions.

Dewey (2) presents a classic example of this process. He was puzzled by what appeared to be a flagpole on a ferryboat, judging by its color, shape, and the gilded ball at its tip. But it projected nearly horizontally from the upper deck and there was no pulley, ring, or cord by which to attach a flag. Also, since there were two vertical flag-staffs on the boat, it was unlikely that the pole was a flagpole. He then tried to imagine all the possible purposes for such a pole and to select the most probable one. First he considered the possibility of its being an ornament, but discarded the idea when he observed that all ferryboats and even tugboats carried similar poles. For the same reasons and for the added reason that it was not located at the highest point on the boat, he discarded the hypothesis that it might be a wireless pole. Perhaps, then, it might point the direction in which the boat was moving and thus enable the pilot to steer correctly. This last hypothesis he accepted because (1) the pole was lower than the pilothouse so the pilot could see it readily, (2) its tip was higher than its base and from the pilothouse it would appear to extend far out over the water, and (3) since the pilothouse was near the front of the boat, the pilot would need some such guide. The same hypothesis would apply to the use of similar poles on tugboats. This, then, was the most probable and reasonable solution.

Almost everyone knows the meaning of the words "verdict," "decision," and "judgment." These are handed down by judges of courts. When we are charged with a traffic violation, the officer gives us a "ticket" and says politely, "Tell it to the judge." Although his words do not express his full meaning, we have no difficulty in interpreting them. We perceive, we make an inference,

and we form a belief regarding this situation. Both the officer and ourselves have formed preliminary judgments regarding the situation. Our emotions may affect our own judgment, and our point of view may be at variance with that of the officer, but neither he nor we have the power to render a final verdict.

When we appear before the judge, what happens? He asks if we are guilty or not guilty. We quickly size up the situation again in order to decide whether to plead guilty and pay the fine, or to argue the case. It is the judge's judgment of what actually happened that most concerns us at the moment. Assume that we plead not guilty. As the judge hears the story, he arrives at his conclusions by going through the logical steps of a reasoning process:

First, he recognizes that there is a difficulty; there is a problem involving two opposite claims which it is his duty to judge objectively, without bias.

Second, he defines the problem. He examines our contention and that of the officer, and notes the points of difference between them.

Third, he sets up a tentative hypothesis as to what actually happened.

Fourth, he sifts the evidence by hearing our version of the facts and that of the officer. The judge looks only at the facts in the case, discarding from his thoughts, so far as humanly possible, any emotionally toned thinking which may be presented in lieu of evidence.

Fifth, he makes his decision and closes the matter with a conclusion which is his final judgment.

A belief is at the base of thought because when we believe, we have formed a concept; that is, the thing has meaning upon which we can base further thought. Dewey further characterizes reflective thought as follows:

Thinking: The Basis of Responsibility

“Active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it and the further conclusions to which it tends constitutes reflective thought.” (2)

This statement makes it clear that once a belief is established upon a firm basis, we have obtained real understanding. In its most characteristic form, reflective thinking takes place when a problem is to be solved and action must be delayed until the problem is thought out.

Scientific thinking draws from experimental evidence. To any problem in such sciences as biology, physics, or chemistry, we apply the scientific method. This method differs from reflective thinking in that it proves or disproves a hypothesis by actual experiments. In this way errors caused by emotions, variations in meanings of symbols, and so on, are avoided. It is this that makes conclusions obtained by the scientific method reliable. The inference must be correct, because it can be checked and verified.

To illustrate: It is reported that the German research worker, Ehrlich, set up the hypothesis that an arsenic compound would be deadly to the spirochaeta of syphilis. He patiently and painstakingly performed his experiment over and over again, varying the ingredients and proportions, until on the 606th trial he found a compound which proved his hypothesis. Once proved, it was accepted because other scientists could retrace his steps and reach exactly the same conclusion. Although Ehrlich named this compound “salvarsan,” it became known as “606,” in deference to his persistence.

Mathematics is the language of science. It is by use of numbers and other precise symbols that a scientist can state operations or steps so exactly that any other scientist

can repeat his experiments. Lancelot Hogben, in his book, *Mathematics for the Million*, calls numbers the "nouns of mathematical grammar." He points out:

"Algebra is just a language in which we describe the *sizes* of things in contrast to the ordinary languages which we use to describe the *sorts* of things in the world." (3)

Scientists complain that the language of words often interferes with clear thinking and sound conclusions. Therefore they feel safer in the language of numbers. But most social questions cannot be stated mathematically. If we attempt to do so, many statements are found to be meaningless. The difficulty of applying the scientific method to social situations is illustrated in the history of the hundreds of coöperative societies that have been set up in many parts of the world. It is possible to prove scientifically that there are great economic savings to be realized by coöperative action. Lower prices through group-buying is one of the advantages, and there are others. Yet few coöperatives have been continuously successful, and many of them have ceased to operate or have encountered difficulties after a comparatively short time. This inconsistency with the results of scientific thinking is due to the human element, which cannot be figured with the precision of a mathematical ratio.

Obviously, human social problems do not lend themselves to scientific thinking; on the other hand, scientific research has resulted in longer, healthier, and happier lives for the human race. The 605 failures that preceded Ehrlich's success on the 606th experiment would argue strongly for the method of the scientist in cases where scientific tests and measurements are possible.

Not every simple thinking process necessarily involves

an issue. We are on the reasoning level of thinking only when we make decisions or judgments involving a point of controversy or a doubt to be resolved. Otherwise, what would there be to judge?

Suggestions for improved thinking

Intelligent adjustment to life depends upon good thinking. Although straight thinking of the problem-solving type requires the application of intelligence, almost anyone can improve his reasoning ability. An individual's train of thought is directed by all his habits and mental patterns.

To many persons mental effort is unpleasant, but that is only because they have not developed skill. Efficiency in thinking can be increased by keeping the mind active. Clear-cut decisions result only from forcing ourselves to think in problem situations. No thinking at the reasoning level comes without effort.

Reasoning is a process of relating previous judgments and learning-experiences in the making of new decisions. For these purposes, earlier judgments or previously accepted concepts must be placed mentally in an orderly sequence, so that they will lead to a logical conclusion. The method of reasoning outlined in this chapter can be used to accomplish this. The first step, after recognizing that a perplexity exists, is to define the problem and find the issue. It is important to locate the spot where the difficulty lies because one usually gets definite ideas about it which suggest possible solutions. Readiness is thereby established for forming a hypothesis. When a tentative solution has been set up, one should test it by searching through his fund of knowledge for facts which will verify or disprove it. Upon the basis of all the facts, he reaches a conclusion. A few precautions must be taken, however:

1. Words are only symbols. Be sure to use them correctly, to apply precise meanings to them, and to avoid those which are emotionally toned. Increase your vocabulary to broaden the range of your thinking.
2. Habit thinking is useful, but only if the reasoning behind the accepted concept is sound. Check your thoughts constantly. Ideas which you have habitually accepted without question may be prejudiced or biased, and thereby will lead you into erroneous conclusions. The more details of reasoning that one can turn over to the effortless custody of automatism, the more freedom he achieves to deal with other tasks. However, decisions of this type are not always to be trusted and should be carefully scrutinized.
3. Do not trust slogans. Tabloid statements too often are loaded with emotional appeal and state only partial truths.
4. Do not permit yourself to rationalize, because this is a process of self-deception. Do you ever, after having set up a hypothesis which you want to prove, look for evidence to support it and close your mind to other facts which would disprove it? Only the rare individual is never guilty of this procedure.
5. Keep an open mind while carrying on reasoning. Suspend judgment until all the facts are assembled. Testing tentative decisions before making final conclusions has significance only so long as your mind is still open.
6. Do not trust to luck, because this is not reasoning. Although "hunches" may have some basis in past experience, too often they are merely guessing.

By observing these cautions, one can form the habit of drawing sound conclusions. Trustworthy judgments result only from weighing the evidence pro and con and considering all possible solutions. For this purpose we must broaden our knowledge constantly by various kinds of learning-experiences. Study is one, reading is another, physical action another, and intelligent conversation yet another.

All processes of reasoning apply the experiences of the past to the needs of the future. If he exercises due caution, the student who is saturated with experience in any field of learning should acquire a degree of confidence in his own ability to reach decisions which will offer, not relief from perplexity, but the background from which to reach and deal with new and more perplexities when they arise. Skill in passing independent, accurate judgment is everywhere the unerring mark of a superior mind.

SUGGESTED FURTHER READINGS ON THE SUBJECT OF THINKING

1. CHASE, STUART. *The Tyranny of Words*. Harcourt, Brace & Co., Inc., New York; 1938. Pages 87-88, 89.

Stuart Chase is an able writer, although probably a little out of his field on the subject of semantics. Nevertheless, he has written with such keen interest and purpose and has marshaled his facts so well that the book is unusually interesting. It contains 395 pages packed with live material.

2. DEWEY, JOHN. *How We Think*. D. C. Heath & Co., Boston; 1933. Pages 17, 4, 107, 92-93, 9.

This author is one of our country's foremost thinkers and philosophers. This book of 300 pages, which was completely rewritten in 1933, is a classic in its field. Although it was written for teachers, many students find it enjoyable reading.

3. HOGBEN, LANCELOT. *Mathematics for the Million*. W. W. Norton & Co., Inc., New York; 1937. Page 13.

Here is a book of 640 pages of human-interest material on the subject of mathematics. It was a "best seller" in England. If one is afraid of mathematics, here is a book which, when taken slowly, will be a happy experience.

4. THOULESS, ROBERT H. *How to Think Straight*. Simon & Schuster, Inc., New York; 1939. Pages 4, 91.

Thouless has made an effort to build into this 246-page book an analysis of thinking. He has taken examples of thinking, both good and bad, from incidents of everyday life.

5. VAUGHAN, WAYLAND F. *General Psychology*. Doubleday, Doran & Co., Inc., New York; 1936. Page 439.

See annotation at end of Chapter 3 (page 72).

Other useful books in this field are:

BARRY, FREDERICK. *The Scientific Habit of Thought*. Columbia University Press, New York; 1927.

BOAS, GEORGE. *Our New Ways of Thinking*. Harper & Brothers, New York; 1930.

BURT, EDWIN ARTHUR. *Principles and Problems of Right Thinking*. Harper & Brothers, New York; 1931.

DIMNET, ERNEST. *The Art of Thinking*. Simon & Schuster, Inc., New York; 1931.

JASTROW, JOSEPH. *Effective Thinking*. Simon & Schuster, Inc., New York; 1931.

ROBINSON, JAMES HARVEY. *The Mind in the Making*. Harper & Brothers, New York; 1921.

Chapter

I4

ESSENTIALS IN THE STUDENT'S PHILOSOPHY OF LIFE

*"Happiness depends, as Nature shows,
Less on exterior things than most suppose."*

WILLIAM COWPER

WHAT is your philosophy of life? This question baffles nearly everyone. Many students confess that they have never thought about the matter. Yet each one of them says in almost the same breath, "I suppose I must have a philosophy of some kind." To sit down and write out one's philosophy of life is the most difficult of assignments. Most of us have some acquaintanceship with philosophical literature and recall Socrates, Plato, and Aristotle, but to bring philosophy down to our own everyday living is a new idea to many of us.

In considering the subject, some of the first questions that suggest themselves are: "What do I think about life?" "What is my attitude toward it?" "What do I believe in?" "What is my religion?" "Is my philosophy related to my ideas of right and wrong?" "Does it have anything to do with moral conduct?" Following such a train of thought, one usually concludes that his philosophy of life has much to do with his *way* of life.

Happiness and a philosophy of life

Who is to say what our philosophy of life should be? Like the development of a personality, the shaping of a way of life is a process of growth. The greatest thing that can be expected from life is happiness. Happiness is one of the oldest of philosophical considerations. Since all questions take their measure from happiness as a starting point, everything we discuss in this chapter will have as its standard of evaluation whether specific applications of our philosophy of life make us, in a final judgment, happy or unhappy.

Everyone knows that happiness is a state of good cheer. Wilhelm Stekel, a Viennese psychiatrist, calls it "the ability to adjust oneself to reality." A cheerful and joyous attitude toward life as we face it day by day with a sense of well-being and confidence indicates that we are happy. Happiness is a symptom that signalizes the fact that all is well. Unhappiness indicates the opposite — that things are not going well. There are degrees of happiness, measured in terms of mental health, just as there are degrees of temperature to measure bodily health. We have our ups and downs — sometimes we are happy and sometimes not so happy.

Chronic or continuous unhappiness is a highly significant symptom of poor mental adjustment. It is a mental illness for which a good philosophy of life is the antidote.

Satisfying needs essential to happiness

Living is dedicated to satisfying needs. Each of us has certain specific wants or needs that must be satisfied if we are to attain inner happiness. The individual's philosophy provides direction in recognizing and meeting his needs.

The principal need expressed by students is the need for economic security. A majority of them say that they do not desire wealth but that they do want to be free from financial worry. Closely related to this need is the desire for an interesting, useful, and financially profitable vocation.

The need for love compares in importance with the student's vocational ambitions among the things he wants in order to achieve happiness. Many persons distinguish between the love of parents or others in the home and love for an individual of the opposite sex — the potential marriage partner. How to plan for their own family life figures strongly in the thinking which individuals do about their way of life. The need for friends and healthy social contacts is one that everyone strives to satisfy. This sense of *belonging* has much to do with shaping our lives. Rarely does a person develop a good philosophy of life if he feels alone in the world.

The need for fortitude and courage to offset fears is commonly felt. Many people think of a philosophy of life as something that gives them fortitude. The human mind demands a scheme for living and seeks something with which to combat fear successfully. Reasoning is the fine art that brings courage into being. Fortitude helps achieve an adjustment to reality. Often something that has been reasoned out by a wise philosopher is helpful in satisfying the need for moral or physical courage.

The motivation and drives that center around these several abstract needs have much to do with shaping an individual's philosophy of life. When we want strongly to be something or to do something, we usually find a way of living that will satisfy the need.

Philosophy as a system of conduct

When philosophy is mentioned, we naturally think of what the great philosophers have said about life. When, however, we think for the first time of our own philosophy of life, we state it in terms of what we ourselves think and do. From a set of papers written recently by one hundred college freshmen it was found that more than half of them started consideration of their own philosophies by going to the dictionary. The most common definition given was, "Philosophy is the science which investigates the facts and principles of reality and of human nature and conduct." Although the dictionary gives other meanings, this is the one that most of them selected. One student expressed the general opinion held by most of the group in this way: "Philosophy is the study of principles underlying human action or conduct; to put it more simply, my outlook on life." It was clear, reading these papers, that each one felt that his philosophy of life was related to his conduct.

Rightly or wrongly, the average person who attempts to formulate his own philosophy approaches it from the point of view of his behavior. Immediately the question arises: "Why do I behave the way I do?" If one goes no further than this, a philosophy of life would pertain solely to his way of doing things.

The background of our inherited and acquired culture influences us, for better or for worse, in the kind of personality that we develop. Each of us feels the ambition to improve our individual status in the society in which we live. The material self that we are, the social self that influences our behavior with other people, and the spiritual self which governs our deeper emotions, all make up our being. The needs of each of our selves vary as the selves

vary. Everyone strives to know the meaning of the conditions that surround his life. Some of the meaning of life that we seek is to be found in our philosophy, or in the manner in which our way of life is expressed.

Attitudes explain our philosophy. Life's experiences as we progress from stage to stage of living mold our attitudes, and the influence of these on our behavior is well known to most of us. The attitudes we form toward institutions, society, and personal achievements definitely affect our way of life.

We know that frequently we use emotionally toned words to express thoughts. A thought expressed in this way reveals an emotionally toned idea. "As he thinketh in his heart, so is he," is a Biblical truth about mankind. Our attitudes are emotionally toned ideas. Attitudes determine our behavior. To illustrate: Persons who frequent gaming houses are those who do not have unfavorable attitudes toward gambling. People who have favorable attitudes toward church are inclined to spend time and money in its support.

S. L. Pressey made some tests on high school and college students and reached two interesting conclusions:

(1) Boys from the seventh grade through high school show rapid increase in their "liberality in point of view," while girls do not change much at these ages.

(2) In college, girls liberalize their attitudes more rapidly than boys.

This author suggests that a natural explanation would be that at high school age girls are more under the influence of the home and its conventional codes of behavior. When they go away to college, they tend to react against restraints, which produces a more rapid change in their points of view. This clearly suggests that attitude-changes are essentially a matter of social influences.

One's history, his experiences, his circumstances, determine his attitudes toward life. Marcus Aurelius said that it is not so much what happens that counts, but how we react to what happens. If our experiences have been bitter, our outlook may be pessimistic; contrariwise, depending upon our philosophy and the way we have been conditioned to meet adversity, we may react optimistically to it. On the other hand, a person who has inherited or acquired every material self-benefit will not necessarily develop a cheerful philosophy; indeed, the reverse often happens. The reactions of an individual who possesses a great deal of money may be influenced by other needs, such as the need for love, or for social security, or a desire to belong.

Our physical health and mental health are significant factors in our outlook on life. All the time we are being influenced by our background we are growing and changing our philosophy, which reflects the attitudes we acquire.

We express our opinion on any question on the basis of our attitude regarding the matter. This has its origin in the kind of experience we have had regarding that particular issue. It is the force of habit behind our conduct, and it can be measured. There are a number of scales on the market for measuring the attitudes of individuals toward various subjects. In a democracy such as ours, the attitude of groups toward any issue also can be obtained. This is done by polling a sampling of individual reactions to the question.

A sense of humor gives perspective. Real humor indicates good mental health. It springs from within and provides ballast to one's philosophy. Thomas Carlyle defined it as follows:

“True humor springs not more from the head than from the heart; it is not contempt, its essence

is love; it issues not in laughter, but in still smiles, which lie far deeper."

Richard Milnes said of it:

"The sense of humor is the just balance of all the faculties of man, the best security against the pride of knowledge and the conceits of the imagination, the strongest inducement to submit with wise and pious patience to the vicissitudes of human existence."

Lincoln's sense of humor was an important part of his philosophy. No matter how serious the situation, he tempered it with humor. His famous specification for the length of a man's legs — "long enough to reach the ground" — was spoken at a time when there was a question whether the Union Army was strong enough for its task.

The story of an Arkansas farmer and his mule illustrates perspective and tolerance gained through a sense of humor:

"Over the hill trailed a man behind a mule drawing a plow. Says the man to the mule:

"Bill, you are a mule, the son of a jackass, and I am a man made in the image of God. Yet here we work, hitched up together year in and year out. I often wonder if you work for me or I work for you; verily, I think it is a partnership between a mule and a fool, for surely I work as hard as you, if not harder. Plowing or cultivating, we cover the same distance, but you do it on four legs and I on two. I, therefore, do twice as much work per leg as you do.

"Soon we'll be preparing for a corn crop. When the crop is harvested, I give one third to the landlord for being so kind as to let me use this small speck of God's universe. One third goes to you and the balance is mine. You consume all

of your portion, while I divide mine among seven children, six hens, two ducks, and a banker. If we both need shoes, you get 'em. Bill, you are getting the best of me, and I ask you, is it fair for a mule, a son of a jackass, to swindle a man — a lord of creation — out of his substance?

“Tell me, Willyum, considering these things, how can you keep a straight face and look so dumb and solemn?”

The most difficult thing in the world to do is to laugh at ourselves. It is much easier to laugh at someone else. Why? Because when a matter seems serious to us we may be looking through the wrong end of the telescope. Others perhaps are seeing the situation in its true perspective.

Philosophy as a moral code

A philosophy of life is more than rules for ethical conduct. One may have a code that is unethical and still have a philosophy of life. Thieves have codes of conduct which they incorporate into their philosophies. Truth and honesty, two virtues frequently regarded as fixed and invariable, apparently may mean different things in different situations. People may be involved in unmoral practices and yet insist on truth and honesty among themselves. No matter how crooked the game, the individuals involved must play it straight within their own group.

There may be honor even among thieves, but thievery is not a socially accepted practice. It is possible perhaps to steal within the law, but society tries hard to make its laws so that this cannot happen. In our social environment what is right and what is wrong do not depend upon individual decision. These are matters that are decided by the social group in which one lives.

Whether an act is right or wrong or a thing is good or bad may depend upon the purpose at the time judgment is made. For example, in time of peace the munitions maker is condemned because his death-dealing products may incite to war. In time of war he is encouraged to produce as many weapons and explosives as he can and as fast as he can. He is then helping to defend his people.

One could enumerate many acts in everyday life which are judged right by some individuals and wrong by others. For example, tobacco growers, manufacturers, and retailers are, according to some extremists, engaged in a pernicious business, producing a product that leads the young to damnation.

It is easy to show that good and bad, right and wrong, may be purely relative terms as "circumstances alter cases." For a simple illustration, rain falling at a certain time is good for the farmer but bad for the hostess who is giving a garden party.

Various elements present at the time an issue arises may decide its morality. Truth and honesty frequently have their meanings defined by the group that sets the standard.

Philosophy dependent upon values. When we know what we value in life we begin to know about our philosophy. For example, a retiring judge of the Supreme Court once said, "I have spent all of my life learning to distinguish between that which is important and that which is unimportant, and to see the truth regarding the important." Arriving at the meaning of truth is an old, old philosophical problem, but this judge made it practical. It was the thing he valued in life above all else.

We may value truth and honesty, and may build our philosophy of life around our concepts of these virtues; but if we are troubled by philosophical definitions which

regard truth and honesty as academic matters rather than as a way of life, we are not progressing in our practical philosophy regarding them. Their values lie in our ability to express them. For example, the baseball umpire calls a man out on a third strike. He bases his decision upon the fact that he saw the ball pass over the plate. That is truth to him even though it may not look like truth to the batter. We ordinarily judge the umpire as honest in his decision. He calls the play as he sees it. We must call all the plays in life as we see them. The truth to us is based necessarily on how we perceive, judge, and reason.

One of the things often mentioned by students in their philosophy papers is honesty. Hypocrisy and deceit have no place in their ways of life. To say, "I get what I want in any way I can get it," represents a lost sense of values. The student who acquires the habit of presenting the work of others as his own fails to get out of life what there is in it for him. We often hear the old saying, "We get out of life what we put into it." Some students repeat this like parrots with about as much understanding of its true meaning as a parrot would have. It is tabloid thinking for them — just a formula statement with little actual meaning.

The more accurately we are able to place values on things in life, the easier it is for us to use these values in our way of life. The things we value most are the things we want most. If we misplace our values by failing to understand our own needs, then we also fail in our practical philosophy of living. If we value honesty, then to be honest with others is a great virtue, but to be honest with oneself is even greater. As Walt Mason once wrote, "A man who tries to fool himself is a bigger fool than he thinks he is."

A person's sense of values has its origin in events and circumstances which have affected him in the past. Perhaps he misjudges certain values on account of some unfortunate set of experiences. For example, one who grew up in poverty may place such a strong value upon money that to possess it becomes his life's ambition and drive. Achieving his goal, he may still be unhappy. One of his real needs may be to have friends. In his drive to accumulate wealth he may have developed unfavorable personality traits which repel others. Now he finds his money power will not buy the kinds of friends he wants. His early childhood deprivations have caused him to lose a sense of proportion in the relative importance he attaches to particular values. It is true that his first need was for economic security, but he also needed love and friends.

It should be noted, on the other hand, that as a result of fortunate experiences individuals may readily learn to recognize proper values in life. Owning and loving a dog, for example, very often causes children to treat all animals kindly and thereby to value kindness in other ways.

Whatever we value most — truth, honesty, courtesy, freedom, friends, wealth, political power, beauty, or other things men live by and for — we need to view that value in its right perspective. First things must come first. How does one know that little things are little and big things are big until he arrives at a basis for judging them? One needs perspective to judge values in life. For example, the individual who feels socially inferior to a group with which he wishes to associate may go to any length to climb the so-called social ladder. He may even snub individuals with whom he has been friendly, in an effort to build up his sense of social superiority. Such conduct clearly indicates a lack of a sense of proportion in consideration of a social value. Competition for social recog-

nition based upon false values finds its parallels in the fields of art, politics, or even the sciences.

We all differ in our needs and in the values we assign to them. Our philosophy or way of life is almost certain to be influenced by the things we value, which may be economic, aesthetic, social, political, or religious in their nature. Paraphrasing a famous saying, one might declare, "Show me what a man values and I will tell you what sort of man he is."

If there were only some positive method of finding out the things one values, what a great help it would be in understanding one's self! Some of the tests that have been devised for this purpose seem to give approximate facts, and are helpful. Gordon W. Allport and Philip E. Vernon have compiled a test of this kind.

Virtue in our philosophy. For each of us there undoubtedly is a right way and a wrong way to live our life. When we have carried out a plan of action which our judgment tells us is in every sense right, we feel virtuous. This takes the form of a glorious sense of well-being. Some call this "having a good conscience," and some call it "using plain good sense." But regardless of the label attached to it, this feeling of virtue should not be confused with feelings of self-complacency, self-centered satisfaction, or smugness.

Virtuous conduct is defined as "that type of behavior which adheres to a social standard to which moral significance is attached." How do we learn about virtue? It is doubtful if it can be taught as a concept; it is something that must be learned. In ancient Persia "Virtue" was included in the curriculum as a liberal arts subject or a science. Today it is an accepted opinion that morals and ideals cannot be taught as such, but that knowledge of these values must be acquired by living experiences.

From the attitudes we acquire from these, virtuous ideas are evolved. Virtuous living depends upon good body-mind health. Benjamin Franklin wrote:

“Experience keeps a dear school, but fools will learn in no other, and scarce in that, for it is true, we can give advice but we cannot give conduct.”

To improve his philosophy of life one must know what constitutes a wholesome way of living. If we would learn about virtue and its significance in a philosophy, we must first learn to segregate the relevant from the irrelevant. To choose the right and avoid the wrong is an acquired ability. Learning about virtue consists almost wholly in a readiness to respond to its effective lessons gained from experience.

Benjamin Franklin, often called the first civilized American, spent his whole life studying the meaning of virtuous living. Whether he needed to or not is beside the point in our discussion; he at least felt the need and was conscious of its implications in spite of the fact that he confessed failure many times. He ordered his life in ways that provided readiness to respond to life's lessons as they came to him.

Franklin tried hard to hold to his principle, “Moderation in all things.” He worked out thirteen virtues for his creed or philosophy of life. The first was temperance — “Eat not to dullness; drink not to elevation.” Most people learn moderation either by observing the effects of intemperance on others or by over-indulging themselves. They adopt temperance as a virtue sooner or later, if they wish to maintain good health.

Probably more people eat themselves into the grave than drink themselves there. Over-indulgence in alcohol, however, is symptomatic of maladjustment. It interferes

with mental health. It injures more people than just the individual involved. The alcoholic habit is a social disease.

Alcoholism is complicated to handle because alcohol is habit-forming, like drugs and other narcotics. The chief difficulty with attempts to practice moderation with alcohol or narcotics lies in the fact that they quickly dull the senses, then reason is gone and the individual does not know when enough is enough. When this is learned from the experience of frequent intemperance, it often is too late. Moderation in all things is essential for a wholesome philosophy; abstinence in some things is necessary to some individuals.

Religion in our philosophy. In the hundred papers by students on the philosophy of life, everyone mentioned religion in some form or other as a code of conduct. While some individuals said they seldom attend church, they qualified their statements by indicating that they do have religious beliefs. Many stated the need for a belief and a faith. One student observed that he had unlimited faith in science but at one time when a relative lay at death's door and medical science had done all it could, he "knew of nothing else to do but pray." The great Canadian physician, Sir William Osler, once said:

"Nothing in life is more wonderful than faith — the one great moving force which we can neither weigh in the balance nor test in the crucible."

Religious faith and prayer have played their part, as students know, in the history of our country. One little-known example of this concerned Benjamin Franklin. It was during the Constitutional Convention in 1787, in a critical period of American history. The delegates unfortunately were so divided on vital questions that any

agreement seemed utterly impossible. At that point Franklin proposed a few moments of silent prayer for Divine direction. The delegates bowed their heads for a brief period, and then went on to complete their work harmoniously.

Abraham Lincoln, too, was a devout man and prayed often for guidance. He was not, however, a religionist in the strict sense. In fact, with his kindly humor he sometimes poked fun at sectarianism.

We all need a living philosophy to bolster our courage in times of distress. Stevenson said, "In the harsh face of life, faith can read a bracing gospel." Some of us find this comfort in the Bible, others find it in wise teachings of other philosophies.

Philosophies of life change

Nearly every student makes the interesting discovery before he has gone very far in setting down his own philosophy of life, that his ideas on a way of life change in the process of recording them. As in reasoning out a problem, the first situation he finds is that he has certain doubts. In answering these doubtful questions he is forced to think things through to find out what he does believe or disbelieve.

Our definitions of a philosophy will vary as our interests vary. We evaluate things and the way we do them on the basis of our interest in them. We all know that our interests change continually as each year we grow older. Our needs and the values we place on them change. The attitudes we take regarding these needs and what is required to satisfy them also change as we learn that there are other things in life that we want. For example, boys or girls of fifteen do not feel the need for marriage and homes of their own that they do when they are older. The

need for financial security may be impressed upon us when we are very young, but the way this need manifests itself in our philosophy changes as we grow into life. We pass through decided changes in attitude regarding a vocational choice from the time we first consider it until the choice is made. Our whole philosophy and outlook on life will be affected by our success or failure in these important stages of living.

In the light of the new knowledge which modern life supplies constantly, we are always gaining new values, and new ways of life. Thus a philosophy of life never is static.

The older philosophies have value

Henry Thoreau said:

“To be a philosopher is not merely to have subtle thoughts . . . but to so love wisdom as to live, according to its dictates, a life of simplicity, independence, magnanimity, and trust.”

We may think of some of the philosophy that has come down to us through the ages as being obsolete and no longer applicable in our present day. Reading the lives of some of the philosophers, we may conclude that they were “queer.” In spite of these conclusions, the more one reads the writings of the great philosophers of the past, the more he becomes impressed with their wisdom. The wisdom of the ages is available to us if we will but seek it. William De Witt Hyde, in his book, *The Five Great Philosophies of Life*, says:

“The five centuries from the birth of Socrates to the death of Jesus produced five . . . principles: the Epicurean pursuit of pleasure, genial but ungenerous; the Stoic law of self-control, strenuous but forbidding; the Platonic plan of subordination,

sublime but ascetic; the Aristotelian sense of proportion, practical but uninspiring; and the Christian Spirit of Love, broadest and deepest of them all." (2)

We often hear it said that in this world nothing absolutely new ever occurs. No doubt if we knew everything that has ever been learned we could trace every principle back to its beginning. Earlier concepts regarded philosophy as a branch of learning confined academically to investigating the ultimate nature of all knowledge. We really need to think to shape our own philosophy, but it is obvious we cannot reason without knowledge.

Although philosophy is practical, it deals to some extent, nevertheless, with realms of thought that have not yet yielded to scientific proof. But it cannot be considered stagnant. Philosophy, the mother of all sciences, still accepts the difficult task of dealing with problems not yet amenable to science. Durant makes this interesting observation:

"Every science begins as philosophy and ends as art; it arises in hypothesis and flows into achievement." (1)

He speaks of philosophy as the front line in the attack on truth, and says, "Science is the captured territory."

We determine our own philosophy

A philosophy of life, in a final analysis, is an individual matter. It is a practical outlook on life. One of our outstanding needs is that this should be a wholesome one. Descartes said:

"I have learned to check my desires and not to fight against the world's laws and to believe that what could not be accomplished was for me absolutely impossible."

This great philosopher was not a fatalist nor was he a cynic. He applied reason and wisdom to his way of life.

We often get the impression that someone whom we do not consider very intelligent has at least a good philosophy of life. If we observe carefully the old fellow who sits on the fence with a straw in his mouth, watching the world go by, we find perhaps that he has thought out a workable design for his own existence. Here we have the crux of it. He has acquired the wisdom of living *within the limits of his comprehension of life*. Almost anyone can think of dozens of ways of life in which the old fellow's philosophy would not work.

Will Durant points out in *The Story of Philosophy* (1) that some old philosophers, and some who are not so old, undoubtedly have had all sorts of wisdom but have been short of common sense. He cautions that in our voyage in search of a personal philosophy we should keep near the "ports of light."

Whether man be slave or free, happiness is his goal and duty. Stevenson said, "There is no duty we underrate so much as the duty of being happy." No one denies that unhappiness comes with such adversities as illness, poverty, and unemployment. Unhappiness is a living situation and must be met head-on. To look for escapes is symptomatic of poor mental health, although there are times when we must seek refuge in a book, or listen to music, or immerse ourselves in work to gain time enough to regain stability. Stekel reminds us that a philosophy of life helps us to adjust ourselves to reality. Mental hygiene says: Face the facts.

Everyone knows persons who have achieved happiness in the face of adversity. They have found a way of life — have formed a philosophy to meet their needs. There are times in our lives when we meet with such grief that it

seems as though the sun would never shine again. But it does. We wonder how the world can go on about us in the face of our suffering. But it does.

In reading such a book as Horace M. Kallen's *The Philosophy of William James* or Will Durant's *Transition*, one sees how an individual's philosophy of life takes shape. Many students are astonished to learn that such able thinkers as James and Durant went through terrific struggles for emotional adjustment before they finally achieved success. A study of the careers of these two men will bring to the student a fuller realization of how the good things of life are measured and evaluated than can be gained from abstract sermonizing, which is often trite.

Breadth of outlook is the most desirable aim of a college education. Pestalozzi, the great Swiss educator, created the slogan, "Education for inner calm." This aim of education constitutes a practical way of life.

Man and society

Individual members of most social groups are able to achieve philosophies for themselves, workable in the society in which they live. However, a leader with a strongly dominant personality occasionally arises to preach a philosophy which does violence to the workaday creeds of average individuals. Such persons may be able to lead groups into thinking and acting as they do. The democratic way of life emphasizes the freedom of the individual to pursue happiness in his own way as long as he does not interfere with others and, therefore, with the state. The basic principle of equal rights for all is sound, but difficulties arise when we grant to all the right to hold office. Leaders who do not hold the full concept of democracy and its meaning are able, too often, to foist their individual philosophies on the whole people. These

tenets may not be sound or in the interest of the greatest good to the greatest number.

Today the world is torn between two great philosophies — one the democratic way of life, which is government by the majority with wholesome respect for the opinion of the minority; and the other the totalitarian way of life — that is, government controlled by one political organization which does not permit the existence of other parties or of individual opinion at variance with the party creed. The idea that the state should come first and the individual second is not new. Plato's *Republic* outlined a beautiful scheme which effectively submerged the individual in the state. It is often spoken of as Plato's Utopia. Nietzsche's philosophy, the background for the Teutonic régime, is steeped in the theory that there are certain men who are finer, stronger, and braver, and that these should rule — the superman complex.

The democratic way of life, presupposing equality of opportunity for all and recognizing the individual, is an ideal philosophy for living. To carry it out requires as a basis education for all on a scale that the world has never known. We have had more than one hundred and fifty years of reasonable success with democratic living in our country. Now it is being put to the test. Democracy as a philosophy may be slow to exert its power when compared to totalitarian rule, but when a whole people is once awakened to the danger of losing individual rights and liberties, its citizens will fight effectively for them if they have time to organize. Democracy and the Christian philosophy are comparable in their moral credo, "Live and let live." The Golden Rule (Matthew vii:12) is basic to the philosophy of democracy:

"Therefore all things whatsoever ye would that men should do to you, do ye even so to them."

Philosophy of life is individual well-being

A wholesome, practical philosophy of life leads to an understanding of the meaning of life. Some people, confronted with the necessity of working out a philosophy, doubt their own ability to accomplish it because there are so many things they do not understand about living. Others honestly see no reason for attempting to work out a way of life for themselves. Nevertheless, when these individuals say, "I take life as it comes," they express a philosophy. At least they have reached a conclusion concerning their own way of life.

Whether we are aware of it or not, we do form habits of behaving in certain ways under certain conditions. The needs that we must satisfy, the attitudes that we form, the values that we assign to the things that are important to us, taken together with our sense of humor, integrate our personality. The total effect of this continuous flow of incidents naturally will influence our way of life. We acquire practical wisdom as we live.

We often wonder why some men with mediocre ability succeed, while others with greater talent and superior background fail. There are women who appear to be plain and ordinary who charm, and others whose beauty and culture fail to bring favor. Life situations such as these are hard to explain. Hyde (2) brings out that the "deeper springs of personality" lie below the realm of consciousness. Still, he says, the "higher elements" of personality found in our consciousness are "reducible to philosophical principles." They are subject to rational control. The degree to which we make our personalities acceptable to ourselves and to those with whom we associate is quite dependent upon the philosophy we evolve.

The person who is vibrantly healthy in both mind and

body does not have to acquire a wholesome philosophy of life; he already has it. Healthy people usually have healthy attitudes, which form the basis for a sense of true proportion and true perspective. As we grow in ability to segregate that which is important from that which is unimportant, we learn to place first things first. The things we value most — those which we decide to seek for the purpose of satisfying our needs — these shape our way of living. William Blake said, "You never know what is enough unless you know what is more than enough."

Mental health is a matter of first importance to the philosophy of living. The five "F's" — fatigue, fear, frustration, flight, and fight — are the demons of life that need to be understood to be conquered. No one can see life in its true perspective under conditions of emotional disturbance and conflict. The individual who compensates for his own inadequacies loses his sense of proportion and invalidates his judgments.

To know our limitations and our strengths and to live within these boundaries is good judgment. To do the things we do well is wisdom. Quoting William Blake again, "No bird soars too high if he soars with his own wings."

We know that personality is the whole person. Everything an individual says and does is dependent upon the way he has developed his numerous selves. The forces at work within these selves can be directed and governed. By so doing we avoid inner conflicts of personality. Integrating our inner forces so they will coöperate harmoniously with external forces demands a philosophy of life. When we are responsible materially, socially, and spiritually, we have achieved such a philosophy.

André Maurois, an eminent modern French philosopher,
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directs attention to the fact that constant effort is needed to achieve a philosophy, because life is not static. He says:

"There is no permanent equilibrium in human affairs. Faith, wisdom, and art allow one to attain it for a time; then outside influences and the soul's passions destroy it, and one must climb the rock again in the same manner. This vacillation round a fixed point is life, and the certainty that such a point exists is happiness." (3)

Most of us acquire a workable philosophy of life by conscious endeavor, and to keep it in working order we must use it all the time.

SUGGESTED FURTHER READINGS ON THE SUBJECT OF PHILOSOPHY

1. DURANT, WILL. *The Story of Philosophy*. Simon & Schuster, Inc., New York; 1926. Page 2.

The student can acquire general information about many of our world philosophies from this large but interesting and readable book of 575 pages. It covers the ancient, middle, and modern ages and sets forth valuable comparisons and contrasts between many philosophies.

2. HYDE, WILLIAM DE WITT. *The Five Great Philosophies of Life*. The Macmillan Company, New York; 1917. Pages v-vi, v.

This is a readable book of 295 pages. It constitutes worth-while background material for shaping one's own philosophy of life.

3. MAUROIS, ANDRÉ. *The Art of Living*. Harper & Brothers, New York; 1940. Page 323.

This beautifully written, readable book of 323 pages was a "best seller." It contains nine chapters covering the arts of loving, marriage, family life, friendship, thinking, working, leadership, growing old, and happiness. It is fun to read and its concepts are valuable.

Other useful books in this field are:

- ADLER, ALFRED. *What Life Should Mean to You*. Little, Brown & Co., Boston; 1931.
- ARCHER, JOHN C. *Faiths Men Live By*. Thomas Nelson & Sons, New York; 1934.
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- DURANT, WILL. *Transition*. Simon & Schuster, Inc., New York; 1927.
- EDMAN, IRWIN. *Living Philosophies*. Simon & Schuster, Inc., New York; 1931.
- JACKS, L. P. *The Challenge of Life*. George H. Doran Company, New York; 1925.
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- LIN YU-T'ANG. *The Importance of Living*. Reynal & Hitchcock, Inc., New York; 1937.
- LIPPMANN, WALTER. *A Preface to Morals*. The Macmillan Company, New York; 1929.
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- THOREAU, HENRY DAVID. *Walden*. The Book League of America, New York; 1929.

Chapter

15

TODAY AND TOMORROW

"I shall try to correct errors where shown to be errors, and I shall adopt new views as fast as they shall appear to be true views." ABRAHAM LINCOLN

LEADERS with vision are invaluable to society because of their ability to interpret the signs of the present day. When Lincoln said he would correct errors when shown that they were errors, and would adopt new views as soon as he realized they were true, he pledged himself to continue to learn — to keep pace with the times. The individual today who acquires such wisdom need never fear for his own personal future.

As we learn to interpret the signs of the times, we gain the ability to predict our direction. We do not know what the morrow will bring but we do know that it will not be exactly as it is today. The important thing is to be able to change and to adjust to the changed way of life tomorrow.

The nature of man

The story of mankind is the most interesting one ever told. Man's nature, in the course of ages, came to be

known as human nature; the other animals kept their animal nature. Because he possessed a phenomenon known as mentality, man was able to cultivate or direct his instincts; and as his powers of reasoning developed, the gulf between him and other animals became wider and wider. Through the use of his mental capacity man has done many things for himself and to himself. He has built houses to live in, but also he has had to use some of these houses as prisons in which to lock himself up. He has made machines to work for him, but they also run over him. His explosives help to till land, to raise food, and to build dams, but in war these same explosives blow him to bits.

Man is sociable; his desire always is to live with other people. He needs to belong. Nevertheless, it seems to be man's nature to want what the other fellow has and to seek to gain dominance over him. There are many explanations why men in groups fight other groups of men. If they only would meet and pool their contributions, there would be enough of everything for all. When two lions meet over a kill, they fight each other for possession. Is it possible that man's instinct for self-preservation still reverts to lower-animal habit and nature? The problem of the future is how man may set up controls for himself. His nature may at times revert to animal nature, but it can be changed for the better if his favorable qualities are encouraged and not thwarted. This is the task of education, and the process of orientation.

Is this an age of frustration?

H. G. Wells, in his book, *The Shape of Things to Come*, suggests the year "1914, the date of the outbreak of the Great War, or 1917, the beginning of the social revolution in Russia, or 1919, the signing of the Treaty of Versailles,

as the conclusive opening of the Age of Frustration and the conflict for world unity." (4)

Is mankind really frustrated today? This condition develops in us as individuals whenever a thing we want to do suffers interference. Groups of people bent on some concerted action may become frustrated if they find their common objective obstructed. Thwarted individuals make up a frustrated, aggressive society; so it may be worth while to look into the meaning of frustration from the standpoints both of the individual and of the group.

Frustration as regards the individual today. Does the college student, as an individual, know if he is frustrated? A student who knows why he is in college, and all of whose forces, external and internal, are in harmony with that purpose, probably is happily adjusted. If, however, his purpose for being in college is vague, or if he is in conflict with others because he is in college, it is quite likely that he is frustrated. Why do we find ourselves so often baffled, and why are millions of other people in this world of today so bewildered? Any single answer to this question is impossible, but analysis of certain segments of the problem of living in the world today may throw some light upon it.

Let us reëxamine briefly two very important phases of each person's life — the selection of a vocation, and marriage. Both are highly personal and, as we know, both are fraught with complications.

Vocational choice and marriage have a common goal, happiness, and they encounter common economic obstacles. One's vocation should provide happiness, allow for the expression of individuality, and at the same time afford an adequate income. Happy marriages undoubtedly are as numerous as ever, but there never was greater need for careful planning for this all-important step.

The work we do in the world, and the family that shares the joys which result from our success in managing our affairs, are at once the center and circumference of the life we live today. The speed with which all things are moving may confuse and bewilder us, because we cannot see ahead. We must learn to maintain our stability, in employment, in the home, and in a social life which suits our individual needs. A successful solution of the problems involved may be affected by the degree of frustration we suffer in making our adjustments to external factors. We discover early in life that our individual desires often are at variance with accepted practices of the social order, but we also learn that it is a mark of wisdom to conform to social demands. If we and the other individuals in our society fail to adjust to the changing social order, chaos will follow.

The rapid change in fundamental thinking about economics is difficult even for experts in this field to follow. How can the average man decide whether it is wise or foolish for our government to buy up most of the world's gold and bury it in the ground? Who knows whether our world of industry would be more successful under a system of free trade between countries, or whether industries should be protected by tariffs long after they are well established? Are these questions unanswerable? Do we attempt to solve problems in social science, not by scientific methods, but by voting?

The effect of our government's continued spending without balancing its budget will not be known for some time. Are there two kinds of economics, one for the group and another for the individual? Everyone knows that he personally cannot spend more than he earns and remain solvent. It is difficult to compare the financial operations of the individual with the large-scale operations of a na-

tion, but it is still clear that one must conserve his income if he is to enjoy financial security.

This is only another way of stating that Western civilization as we have known it is passing. This is basically why so many scholars today are studying, writing, and talking about the security of the job and the sanctity of the home. Freedom to express our spiritual life on the job, in the home, and in our society is our desired way of life. The fear that this freedom may be taken from us is the basis of our frustration.

Democracy and totalitarianism. Our democracy represents our collective mind, which is made up of many individual minds. The totalitarian or fascist type of government is dominated, mentally and physically, by self-chosen leaders who hold power by force. They presume to tell their people what is their way of life. In a democracy the people may vote out leaders who do not represent their cause as they themselves perceive it.

Archibald MacLeish, in a book entitled *The American Cause*, says:

“What the enemies of liberty would have us take the word democracy to mean is not what Adams thought it meant, or Jefferson, or those who took it westward through the Shenandoah, or those who came to find it here by shipload after shipload through a hundred years. . . .

“If democracy is nothing but the world of innumerable automobiles and the best telephone system on earth and a new gadget just around the corner and the radio driveling on in the hotel lobbies eighteen hours out of the twenty-four and the simpering legs in the magazine advertisements and the simpering voices on the movie screen and the hundreds of thousands of miles of roadside bill-

boards with the billboard faces and the ten millions of unemployed waiting for the next boom — if democracy is only this, then democracy cannot survive attack, for democracy is not a cause that men will fight for.

“But the true issue is not this issue . . . and democracy itself is neither things nor goods nor fatness and indifference and an empty heart. . . . The real issue is an issue between the frenzy on the one side of a herded, whipped-up, crowd-begotten ‘cause,’ and on the other side the single man’s belief in liberty of mind and spirit; his willingness to sacrifice his goods and comforts and his earnings for its sake. . . .

“For democracy is never a thing done. Democracy is always something that a nation must be doing. . . .

“Democracy as a fighting faith is faith in the freedom of the common people, faith in the capacity of the common people to create a world more human and more decent and more just than any world a tyrant or a demagogue or any so-called revolutionary party or any self-appointed aristocracy of wealth and talents can impose upon them.” (2)

Joseph Henry Jackson, book reviewer for the *San Francisco Chronicle*, reviewed MacLeish’s book on March 8, 1941. After discussing the contention that the Second World War was begun because the European powers both want the same thing, he says:

“The most stupid could see that the issue was something else entirely, that in fact it was the issue of which of two ways in life should triumph in the world. Not in Europe. In the world.”

We may as well face the whole issue as a revolutionary conflict which has repercussions that have a tremendous effect upon our way of life. If the student will but open his eyes and look, he will perceive that conditions during the twenty-five years between the two wars led up to our present frustrated state.

College is the one place today where the individual can study these problems in peace and can get his bearings upon today's world economic and social situations. No one denies that extreme frustration in world economics is the basis for the present struggle for supremacy between the two philosophies of life. But the individual, having learned to adjust his personality to meet violently changing conditions, must carry on in his own way.

Yesterday, today, and tomorrow

Everything that is going on in the world today had its inception in some form yesterday. Man can learn much about how to conduct himself tomorrow if he will but look to the record of how mankind behaved yesterday. How far back shall we go in our study, and how much time shall we devote to it? Shall we start with Columbus, or shall we go back to the ancient Greeks and Romans? Does this knowledge help us to understand what is happening around us today? And will it aid us in determining what we should be prepared for tomorrow? One thing is sure, and that is that our thinking needs to be above the levels of reverie and habit or routine if we are to resolve our problems. It is necessary to reason from the knowledge we now have at our command, unless we are content to let others do our thinking for us.

What took place yesterday that influences our conduct today? Whether we think of yesterday as twenty-four hours ago, or as twenty-four years ago, makes a vast differ-

ence in our perspective. Whether we think of tomorrow in terms of hours or years affects our estimate of future changes. No one denies that knowledge gained today will help us determine our next step tomorrow. All scientific progress has been made on this basis. Each bit of knowledge about what has happened in an experiment lays the groundwork for the next investigation, until finally a scientific conclusion is reached.

Scholars in the social sciences tell us that the social order, or the way of human life, is changing so rapidly that most of us cannot see what is happening. Scientists have learned to make such effective use of natural forces for the service of mankind that life today is very different from that of yesterday. As Carl Becker says in his *Modern History*:

“Because of the fact that these forces have been made to work for us, the conditions of life have changed more in the last one hundred and fifty years than in the preceding two thousand years.” (1)

He points out that if Socrates had appeared in Paris in 1776, he would not have found life greatly changed in the two thousand years since his own times. If Benjamin Franklin should return to Philadelphia today, less than two hundred years after he lived there, he would find more changes in his home town than Socrates would have found in a foreign land after two thousand years.

The speed with which the social order is changing puts strains on the individual. We hear on every side that there is terrific mechanical progress being made but that there is also a pronounced social lag. Man is building machines so fast that his poor biological frame cannot run them. Harry Elmer Barnes says, “We stand today with

our mechanical foot in an airplane and our social foot in an oxcart."

If the world is changing faster than at any time in the history of man — and this seems to be the fact — it behooves every individual in this present society to strap on his orientation compass to keep himself right side up. It is phenomenal how the individual can adjust to things once he understands what it is that he is adjusting to.

Youth of yesterday. Parents of students in college today were in college or just out of school in 1917, when this country entered the First World War, which was expected to save democracy at that time. Twenty-two years later international conflict broke out again in what we now speak of as the Second World War, which is said by the Axis Powers to be for the purpose of establishing a new world order. If we had a complete picture of everything that has been going on in the quarter century between these two wars, could we predict what will take place in the next twenty-five years? This is the question that so vitally concerns everyone today. How accurately the effects of the rapidly changing social order can be predicted is decidedly problematical.

In 1917 there was no widespread feeling of insecurity as regards employment; jobs were more plentiful. Not many persons who are past middle age today owned automobiles then. Motion-picture theaters had much smaller attendance. There were no radios. There was much less of going out to night clubs or hotel dances. Most entertainment centered around the home.

After the First World War a noticeable craving for commercial entertainment appeared, some say as a result of the habits of relaxation and the types of amusements that soldiers on leave sought, to escape from the boredom and frustrations of military life. There was a general and

sudden spread of a new spirit of personal freedom. Many men who had never before been away from home experienced for the first time release from restrictions. After the war many never returned to their home communities. The popular song was, "How Ya Gonna Keep 'Em Down on the Farm after They've Seen Paree?"

In the period between the two wars many inventions were developed that served to make life less humdrum. Also the decade from 1919 to 1929 was largely a period of bonanza and rise in income levels. As a people we were prosperous in the first ten years after the war. Then came an economic crash and, although people were bewildered, for another decade they held faith that the "good old days" would return.

This was a period when teachers and leaders talked to youth about peace, coöperation, and good will, and the younger generation believed their words. When a Second World War broke out, older men and women were bewildered and could not understand why youth was slow to rise to the war spirit.

Youth today. This is only a small part of the picture of what was actually taking place while the present young men and young women were growing up. College students of today will soon be guiding their own children as their parents guided them. Naturally, if adults are politically and economically and socially bewildered, it is to be expected that their children will express many of the same characteristics. It is to be seriously doubted whether there is such a thing as a youth problem separate from an adult problem. Age is only a degree of experience in this life, and the transition is no faster for adults than for young people, except that age has habit-patterns which are more difficult to change.

The American Youth Commission in 1935, in a study

of the youth problem, secured first-hand information and opinions from 13,500 individuals from sixteen to twenty-four years of age. Their education ranged from less than sixth grade to four or more years of college. Questions were asked about wages, relief, child labor, suffrage, employment of married women, drinking, and war. Only one fourth of the number interviewed believed there was no "youth problem." Less than one third had no "perplexing personal problem." Substantially more than half of those who had problems specified matters relating to economic security.

The need for social action was found in three general areas:

(1) *Employment*: For hundreds of thousands this means a job with wages that will supply acceptable living standards and provide for the future.

(2) *Education*: For large numbers of individuals forced out of school for economic reasons, equality of opportunity is needed, and an educational program which is in harmony with their needs.

(3) *Recreation*: Millions of young people need social living and healthful, satisfying recreation — need constructive leisure-time programs to lead away from delinquent behavior and to add to the spiritual stature of those who participate.

Can we isolate a youth problem? For example, there can be no doubt that unemployment involves a social hazard for all ages. When does an individual become an adult? Do his problems change suddenly? Remembering that personality is a matter of continuous growth, we realize that no sharp line of demarcation or instant of time characterizes the change from youth to adulthood.

The college student today has marked advantages over the college student of twenty-five years ago. Because of

the advances in medical and psychological research, he can better understand his own physical and mental health. He can know whether he is physically and mentally capable of completing his college course, or of achieving his ambition vocationally. When he finds that he is behaving peculiarly, he has means of finding out why. For example, if he has feelings of inadequacy, he knows that he probably has selected an activity which is beyond his capacity to cope with, or that he lacks the necessary interest and motivation to press through to the point where he will feel secure. The college student can know what his fears are and why they exist. He has available to him every possible bit of information that will help him to avoid frustration in the world in which he lives. His need is the desire and the will to know. When he develops flexibility to change in his own personality, for him ease of adjusting to social change has been accomplished.

Training for tomorrow. Horace Greeley said, "Go West, young man, and grow up with the country." Today the young man, having reached the shores of the Pacific, looks out upon new frontiers. These are to be found in the task of consolidating national gains in corporate wealth and in industrial greatness.

The new frontiers need intellectual leadership more than they need the husky pioneer who could stand nature's hardships. It is essential that every young person study the past in order to understand the present. He can know very little regarding the future and what it holds for him unless he understands a good deal about the present world of affairs.

To get the matter closer home, let a college student think back ten years to a time when he was in the third or fourth grade. His memory of this period may be vague, but it is possible to reconstruct situations which are in-

teresting and significant today. Undoubtedly our philosophy of life at that age centered around physical comforts and the love shown us by parents and teachers. In many cases we retain memories of pressures brought to bear to cause us to do better in our studies, to be on time, to be in all ways a good little boy or girl. To some of us these continual admonitions brought a degree of resentment which seems absurd now.

Our earlier experiences, both pleasant and thwarting, in pre-school, elementary, and high school years have had much to do with the philosophy of life which we have today. They have affected the development of our personality. They help to determine also what our personality will be in the future and how it will function. The accumulated evidence of the ten years just past may offer a starting point for forecasting the possibilities of the next few years.

A general prediction based on normal conduct would be that in ten years, at the age of thirty, today's student will be married and getting established. At forty the community will be beginning to recognize his presence. Forty seems old to one who is now twenty, but wait! At fifty, he will have arrived, and will have begun to capitalize on the years that have gone before.

Looking ahead, there are two things each would like to know: (1) What will he himself be like one, two, or three decades hence? (2) What will the world about him be like? The first is a personality prediction; the second is a sociological and economic problem. The answer to the first question lies with each individual. He may look from the ten-year point in his life along the line of development up to the twenty-year point, and then project his life onward for the next ten and twenty years or as far as he can. The second question is answered by studying care-

fully what has happened in material and spiritual development in the world in the past, and then looking squarely at what modern progress means.

J. B. Priestley, in the *Forum* for May, 1940, states our present-day situation well when he says:

“I have certain convictions that I am not likely to lose, even during a world upheaval.

“For example, I am absolutely convinced that, whatever man is, he is not merely the stupid animal, homeless and lost in a universe that is nothing but a vast, idiotic machine, that so many of our contemporaries imagine him to be. (It is the despair created in this barren outlook that is at the root of much of our present trouble.) There is in the universe a moral order, though it may be of a scope beyond our present conception. Man’s highest aspirations, the dream of paradise that seems always to have haunted him . . . these are not part of some pitiful illusion. The flashes of ecstasy most of us have experienced are glimpses of a fundamental reality. . . . Even the world the ordinary man enjoys, when he does enjoy it, is largely a legacy from thinkers and artists of the past.”

The individual mind in training today must prepare for the guidance of the group mind tomorrow. Today’s college student has a challenge. While he represents only $1\frac{1}{4}$ per cent of the total population, in ten years he will show leadership and in twenty he will be effective. Rebellion is not the remedy for mankind’s present plight; what we need is light. The college man and woman can insist on knowing; teachers can and will answer, if youth will but ask. Science can and is doing much for mankind, but science needs to be harnessed, organized, and put to

use. Artists, poets, and thinkers can serve a useful purpose if they isolate the germs of despair. Scientific realists in economics, sociology, and psychology can point out ways and means of combating social ills.

As psychology progresses in the direction of an exact science, we shall know more about the great possibilities in the development of the mind. The government has appropriated millions for the study of plants and pigs, but not much to find out why man behaves the way he does. Small beginnings have been made, such as schools of human relations and child-welfare centers. These are supported largely, however, by appropriations from private foundations which contemplate the betterment of human life. The surface is only being scratched. Nevertheless, measurement of personality is becoming a reality and the time is not far distant when mental attitudes will become subject to evaluation. It is entirely conceivable that mental adjustment will yield to scientific methods. Studies of the human personality will result in a recognition of the human being as a whole. Conduct patterns of persons can and will be molded in the light of the best psychological findings.

When it becomes general knowledge that personality is subject to change, that emotions can be educated, and that attitudes respond to treatment, man's progress will be more rapid. Human understandings and relationships will be clarified to the extent that coöperative efforts will replace individual or group competition. The so-called "Machine Age" will pass into human control. An educational system will develop that will influence definitely the life and manners of people. The chief concern of man no longer will be his working hours, but the proper use of his leisure.

The world of tomorrow — a decade or two hence —

should be far more proficient in the science of human relations than it is today. We think of the Golden Rule as a good philosophy; soon we may recognize it as a good policy for getting the most out of life. Knowledge in the field of personality engineering alone will not solve the problem, but when man sees the human machine in the way he now views his mechanical devices and realizes the importance of treating himself as well as he treats his machine, he will awaken to his possibilities of brain and physique. It is estimated that electricity today is not more than 10 per cent harnessed, but what must be the estimate on man's brain power! Future historians will comment sadly upon the stupidity of man in directing his energies against himself instead of utilizing them for his own good.

Technological improvements and civilization

Until well into the nineteenth century the great majority of the world's population resided in rural areas. The Machine Age began about one hundred years ago. The invention of one industrial machine after another has made tremendous changes in the ways people communicate with each other, and in how they travel and manufacture and transport their goods.

The machine has caused concentration of populations in large industrial areas all over the world. The old guild system, where the employer-owner of an industry and his journeymen and apprentices worked together with equal responsibility toward each other, has been replaced completely by the capital-and-labor system. The last one hundred years has seen labor gain the franchise to vote and the right to bargain collectively. Today there is social strife involving the welfare of the worker,

the sources of industrial capital, and, strangely enough, the rights of the consumer, who represents all classes.

The nations of the world have developed trade because they have had manufactured surpluses to sell. This has resulted in colonization and power politics entering our way of life. Socialistic schemes which have engrossed the thinking of masses of people have resulted in great international struggles.

Rapid growth now taking place in the understanding of human needs will in time bring about universal education in certain fundamental concepts of economic welfare. First we must realize that technological developments are not to be feared and that they ultimately will save mankind. Second, the abundance for all which will result from these developments will help man to control his nature and no longer to want what the other fellow has.

It is generally believed today that as new machines are developed more and more people will join the ranks of the unemployed. President Karl T. Compton of the Massachusetts Institute of Technology denies that this is so. He says that technological improvement works in two ways: first, it results in a decrease in the amount of labor required for production; second, it develops new things which give opportunities for new jobs.

Nevertheless, these new developments frequently create another problem — dislocation of labor. An example of this is found in the cotton industry. The cotton gin eliminated many jobs in the South, but it also led to increased employment in the cotton-textiles industry in the North. No practical solution of the problem of dislocation of labor has yet been found.

However, many economists now think that there is an actual displacement of labor by the machine, because demand for goods has not kept pace with our ability to

produce them. Some social scientists set 1926 as the year during which the machine began actually to displace labor. From 1926 to 1929 there was a decided increase in unemployment in the productive industries, even though this period was one of the most prosperous in history. If this condition continues, the solution will be for more people to enter the so-called "non-productive" occupations, such as the arts, education, and health work. Opportunities in these and other fields will increase as the working day becomes shorter and man has more leisure time for avocational pursuits.

The automobile industry provides an outstanding example of the fact that inventions create new and increased employment. In 1903, there were 11,235 automobiles produced in the United States. In 1940 our factory sales of automobiles and trucks totaled 4,476,000. In this same year 447,400 workers were employed in automotive manufacturing and approximately 1,350,000 in sales and service. It is estimated that, including the above classifications, plus highway workers and commercial vehicle drivers, more than 6,500,000 individuals are employed in the motor transport industry in this country. Alfred P. Sloan, Jr., president of General Motors Corporation, estimates that by 1960 there will be between 35,000,000 and 38,000,000 motorcars on the highways. Such development will result in even greater numbers of workers in the industry.

Highways are one of the big by-products of the automobile industry. Taxes on cars and gasoline have built highways and policed them, and thus given employment to many people. When we think of other industries allied with and contributory to the motor-vehicle field, such as mining and refining of ores, manufacture of steel, rubber, and fabrics, the machine-tool industry, and hundreds of

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others, we see an endless chain. For example, one automobile company reports that for all purchasing purposes, "ranging from paper clips to 250-ton drop forges," it buys from 1200 outside industries and supply firms.

For another example, take the motion-picture industry, which had its first commercial public showings about 1910 and "learned to talk" as recently as 1929. The great number of people employed in this industry and its allied fields probably will continue to grow.

Then think of radio. Musical programs were first broadcast by KQW, in San Jose, California, in 1912, but general use of radio receivers dates from about 1922. The word "broadcast" was used first in 1924. The microphone came into use as the result of a Bell telephone invention, which shows how one industry expands from another. From radio development we eventually will see television perfected. With sound and pictures being transmitted without wires, enormous future educational developments will follow.

With the rapid rates of advance in means of communication, transportation, and housing, and in things to eat and wear, we are getting to the point where we are surprised at nothing. Norman Bel Geddes, an engineer looked upon as a most daring and yet practical originator of new ideas, writing in 1931, prophesied many wonders that have since come to pass. Some of his other prophecies seem to be near accomplishment. In this group are television, a new fuel (U 238), revolution of the musical scale, a substitute for paper, and exploration of the sea bottom and of interplanetary space. There are possibilities of new and increasing employment in many fields which will open up in the future.

However, nobody denies that a large number of the vast army of unemployed actually are unemployable in the

world as we know it today. As we study people with knowledge of the principles of physical and mental health, general intellectual ability, emotional stability, and other personality factors, it becomes apparent that those who are maladjusted in these respects usually are found in the ranks of the unemployed. The world we live in today has a momentum like the "joy wheel" at the carnival; to stick you must stay near the center. Because the machine has displaced manual workers at least temporarily, the employer now has many more candidates to select from. In this selection process the unemployables show up. All young persons know they will meet competition in their vocations, regardless of what lifework they select. That is the world we live in today and it is a cold fact to be faced. When we accept the situation, it is obvious that the young person in college needs to orient himself to it.

The corollary to the fact that in a competitive society there is not enough work for all, is that in a coöperative society some work must be found for everyone. Just as we recognize today that there is plenty for everyone to eat and to wear, we must learn also that there really is something for everyone to do, excepting always those who are physically or mentally incompetent.

The consumer's problems bulk large in our social and economic picture. When goods can be manufactured and food grown at less cost, more people can buy. The catch seems to be that people cannot buy unless they have satisfactory wages. This is one of those endless chains of circumstances, but today we are approaching a new era where wages, money to buy with, and the work of producing the products needed will be brought into balance. Walter Chrysler pointed out that an automobile costing \$600 today would cost \$3500 if it had to be built with the tools of a few decades ago. We will find this same prin-

ciple of price reduction in quantity production true in connection with thousands of products.

The next economic development undoubtedly will be centered around the interests of the consumer, who decides what he wants. Production will follow his demands. When labor and capital both understand that their common goal is to satisfy buyers, they will settle their differences humanely. No one knows just how it will take place, but this ultimate objective is becoming nearer and clearer as the science of public relations improves.

When the world becomes free from the necessity of inventing new machines of destruction for war, no doubt inventive genius will again turn to improving ways of life for mankind. Material developments which affect the lives of people bring about changes in attitudes, even though they are accompanied in many cases by fear and general confusion.

Medical science and civilization

The development of the art and science of medicine probably is the most exciting thing that has happened to man since he first sat down by a fire. It is natural that the study of medicine should advance, because man has always sought relief when he has felt physical pain, and because he naturally clings to life.

Many dreaded diseases of yesterday do not exist today, and many we now have will be gone tomorrow. Tuberculosis is a disappearing disease, and, thanks to insulin, diabetes is no longer to be dreaded. No single effort for helping man is so well organized or is making so much progress as medicine.

Some diseases caused by civilization. Even though many diseases are being stamped out gradually, new diseases, due to modes of living, are appearing. One of these is

high blood pressure. Harvey Graham, in his book, *The Story of Surgery*, speaks of it as a disease of civilization. He states that when primitive man was frightened or annoyed he could jump into flight or fight, expending an increase in strength to serve its purpose. Today, when fear or annoyance occurs, man does not resolve the physiological processes of increased blood pressure by violent exercise. "Constant headaches, inability to concentrate, and failing vision are among the first consequences," and further annoyance and worry, and consequent further rise in blood pressure, is our typical response. While this condition formerly occurred primarily among the aged, it now is common to men and women around the age of thirty. It is caused by prolonged contraction and permanent constriction of arteries, due to tense living.

There is some evidence that nervous and mental diseases are on the increase because of our present-day high-pressure living. Medicine today offers hope for control of these diseases through knowledge of mental hygiene. The formerly fatal illness known as "general paresis" has been treated successfully by means of inducing malarial fever. Physicians are experimenting with other new treatments for mental illness, outstanding examples of which are the use of insulin and metrazol shock in dementia praecox. That drugs can be more than merely palliative in the treatment of certain forms of mental diseases — that they can cure as well as subdue emotions and ease pain — is a new discovery.

Other diseases of civilization are caused by processing and refining foods to such an extent as to cause an increase in diseases of the alimentary tract. Peptic ulcers and appendicitis are examples. The increased market for vitamin concentrates is an indication that tomorrow will see this "civilized dietary" corrected.

In spite of these diseases of civilization, the span of life is steadily increasing, showing the result of the excellent work that is going on in preventive medicine. Medical science finds it possible to predict many advances that will be made in this field.

Medicine and accidents. Graham suggests that there probably always will be a surgery for accidents because of man's mode of life and his transportation. Surgeons now know the approximate type of bone fracture to expect from any particular kind of automobile collision. For example, they speak of "bumper fracture," which occurs just below the knee, and "dashboard dislocation," a dislocation of the hip which occurs in head-on collisions.

It is reported that automobile drivers between the ages of seventeen and twenty have about *seven times* as many accidents as do drivers of any other three-year age group. It is a fact that young people know *how* to drive and are very alert and quick in their reactions. The outstanding criticism regarding their driving is that they do not seem to know how *not* to drive.

The advance of civilization has been accompanied by increasing numbers of other types of accidents, also. The number of accidents in industry has been greatly reduced during the past few years. Those that occur in the home and in recreational areas also should become fewer as education in safety measures is disseminated more generally. It is prophesied, however, that the number of high-way traffic accidents will continue to increase.

Leisure and civilization

Except for times of war, there is a trend today all over the world for a shorter working day, which means more leisure. The intelligent use of leisure time probably is a new thought to many. May and Petgen in 1926 were

commissioned to make an international study of leisure time. In their book, *Leisure and Its Use*, they report:

“It is significant that one of the chief arguments of those opposed to the shortening of working time, in Europe as in America, has been that the people do not know what to do with their free time and tend generally to put it to unfortunate uses.” (3)

Industry some years ago instituted planned recreational opportunities for its employees. Today such programs are on the wane because, with longer evenings and week-ends, employees desire to create their own kinds of recreation. Man's independent nature engenders a certain dislike for paternalism of all kinds.

People today are beginning to see the wisdom of playgrounds and recreational centers; these bring a sense of ownership in community affairs. It is well known that the city with many parks and playgrounds enjoys a proportional decline in juvenile delinquency. There is mounting evidence of the values to be derived from civilized, properly utilized leisure.

The same automobiles which carry workmen to their daily jobs also transport them and their families into the country. Our limitless development in the automobile industry and the increased number and quality of our roads augur well for this kind of use of leisure time. It has long been known that most people enjoy getting away from city congestion and near to nature for recreation.

We note in our country more and more people developing a week-end program of two full days, Saturday and Sunday. Sports occupy the leisure time of a growing number of people, and as a result American youth is becoming healthier both in body and in mind. We find a

growing tendency for people to develop hobbies. Eventually each individual will consider at least two avocations at the same time that he is planning one vocation. Many new ways of enjoying life in avocational fields will come from interests which grow out of free endeavor.

In spite of all the facilities at hand, we cannot conceive the possibilities that exist for the individual who is educated in the use of his leisure time. This country is only on the threshold of its opportunity in this direction. It is significant that as the working day becomes shorter, the need grows for knowing how to utilize spare hours.

Adjusting to today for tomorrow

To learn to interpret the signs of the times is the challenge to college students. Without dispassionate and intelligent reading and observation of trends, no one can really understand why we are now, today, meeting so many points of view regarding the best way of life for mankind. Such reading and observation are essential in the college student's orientation, for how else can he gain foresight regarding his own present training for useful living in this changing world ten, twenty, or thirty years hence?

It is not so much the changes that are going on about us that concern us as it is our ability to adjust to these changes. Are we like pieces of bark, tossing hither and yon on the ocean of life, or are we like big ships cutting through the waves and steadily holding to a course?

The building of a solid personality that can meet any change is our objective. A will to understand ourselves and the people about us is the important thing. Everything else is made up of matters with which the intelligent mind can cope. The lessons we learn from living with people today will be useful tomorrow.

The fearful individual is the frustrated individual. If he learns to meet the problems of today without fear, he will no longer feel insecure and bewildered. The pioneers asked for no security when they went out to conquer new lands. They built security for themselves. There are new kinds of frontiers to develop, notably in the sciences and in the art of living happily with other people. There is dawning today a larger coöperative effort which is sure to achieve greater security for everyone.

The technological developments taking place today are causing some changes in the concept of the individual and his relationship to society. Some foresee the subordination of the individual to society, as we have seen it happen elsewhere in the world. Others believe that the fruits of technology can be made available to all people. The thesis of this chapter holds to the latter view.

This is the day of material and spiritual plenty for all. We have learned to make our technology produce things for our material comforts, but today undue emphasis is placed upon the machine because we are working for the machine instead of making it work for us, as it can and will be made to do. We, the people, know the necessity for this and will gradually learn how to do it. This is the promise for tomorrow.

In time of war, when people are bent on destruction, bigger and sturdier machines are a tremendous advantage to the side that possesses them. Yet history always has shown and probably will continue to show that it takes intelligence and generalship to win a war. In other words, the war-machine must be adequately manned and directed to be effective. No one needs to be told that this is equally true in peacetime. The basic difference between war and peace lies in the personalities and attitudes of the people. Unless a nation is united in prosecuting a

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war, it will lose; unless a nation has a unified purpose in carrying out a way of life, it will not achieve success.

From time to time we face small civil wars in our labor relationships. There is evidence that industrial conditions are improving, due to better knowledge of the human element. There is growing understanding that people are not machines and that spiritual values must be taken into consideration. Our will to live the democratic way of life eventually will find effective means to take account of the human motives in capitalists, laborers, and consumers. Since in the final analysis all are consumers, mutual welfare should in time become the common objective.

Perhaps at no time in history has the need for men of vision been so great. At no time has there been such a demand for intellectual and emotional stability. Abraham Lincoln's vision of the needs of our country is an outstanding example of these qualities in a crisis. He said, "Important principles may and must be flexible." He applied this wisdom to his plan of life, which included correcting his errors when he learned he was in error and adopting new views as he found them to be true views. There can be no finer philosophy. It constitutes both a scientific and a human approach to life as we shall live it today and tomorrow.

Students need not become bewildered because of the confusion among leaders. Young men and young women of today are the leaders of tomorrow. As the younger generation learns to think creatively and to act coöperatively, it will take over the responsibility. When we all realize the importance of every man and woman in this great fraternity of mankind, the new day of freedom for the individual will dawn. In the meantime there is work to be done, as there always will be.

SUGGESTED FURTHER READINGS ON THE SUBJECT
OF TODAY AND TOMORROW

1. BECKER, CARL. *Modern History*. Silver, Burdett Company, New York; 1941. Page 2. The selection on page 372 is reprinted by permission of the publishers.

This is an easy and interesting modern history book of 825 pages. It includes events up to 1939. In it are listed selected additional readings under the headings "Brief Accounts" and "Longer Accounts."

2. MACLEISH, ARCHIBALD. *The American Cause*. Duell, Sloan & Pearce, Inc., New York; 1941. Pages 18, 20-22, 28, 42. The selections quoted are reprinted by permission of the publishers.

This small book is a popular treatise on American democracy. The author gives as refreshing an interpretation of the meaning of democracy as will be found.

3. MAY, HERBERT L., and PETGEN, DOROTHY. *Leisure and Its Use*. Copyright 1928 by A. S. Barnes & Co., Inc., New York. Page 7.

These authors were given a grant to study the leisure-time activities in the principal countries of Europe. This 268-page book tells about many organized recreational activities and reports the authors' interpretations of leisure-time problems.

4. WELLS, H. G. *The Shape of Things to Come*. The Macmillan Company, New York; 1936. Pages 19-20.

Although we may not agree with all that Wells says in this 431-page, fast-moving account of things to come, we will agree that he has written here a thought-provoking book. The first twelve pages, "The Dream Book of Dr. Philip Raven," is a story one will long remember. As literature it probably is Wells's best. His interpretation of the "Age of Frustration" is stark history.

Other useful books in this field are:

ADAMS, JAMES TRUSLOW. *The Epic of America*. Little, Brown & Co., Boston; 1931.

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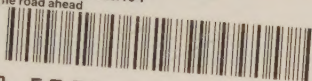
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